

Internet Appendix for

“Industry Interdependencies and Cross-Industry Return Predictability”

June 2, 2014

This Internet Appendix reports the complete set of additional results described in the paper. Tables AI and AII report complete results for the principal component predictive regression specifications that include an autoregressive term and the lagged market return, respectively, discussed in Section I.A of the paper. Tables AIII and AIV do likewise for the target-relevant factor specifications discussed in Section I.B of the paper. Table AVI reports complete results for the adaptive LASSO specification that includes lagged economic variables discussed in Section I.C of the paper.

The following is the set of economic variables from Goyal and Welch (2008) used in Tables III and V of the paper and Table AVI below.

- Log dividend-price ratio (DP): log of a twelve-month moving sum of dividends paid on the S&P 500 index minus the log of stock prices (S&P 500 index).
- Log dividend yield (DY): log of a twelve-month moving sum of dividends minus the log of lagged stock prices.
- Log earnings-price ratio (EP): log of a twelve-month moving sum of earnings on the S&P 500 index minus the log of stock prices.
- Log dividend-payout ratio (DE): log of a twelve-month moving sum of dividends minus the log of a twelve-month moving sum of earnings.

- Equity risk premium volatility (RVOL): based on a twelve-month moving standard deviation estimator (Mele (2007)).
- Book-to-market ratio (BM): book-to-market value ratio for the DJIA.
- Net equity expansion (NTIS): ratio of a twelve-month moving sum of net equity issues by NYSE-listed stocks to the total end-of-year market capitalization of NYSE stocks.
- Treasury bill rate (TBL): interest rate on a three-month Treasury bill (secondary market).
- Long-term yield (LTY): long-term government bond yield.
- Long-term return (LTR): return on long-term government bonds.
- Term spread (TMS): long-term yield minus the Treasury bill rate.
- Default yield spread (DFY): difference between Moody's BAA- and AAA-rated corporate bond yields.
- Default return spread (DFR): long-term corporate bond return minus the long-term government bond return.
- Inflation (INFL): calculated from the CPI for all urban consumers; we use an extra lag for inflation to account for the delay in CPI releases.

REFERENCE

Mele, Antonio, 2007, Asymmetric stock market volatility and the cyclical behavior of expected returns, *Journal of Financial Economics* 86, 446–478.

Table AI
Principal Component Predictive Regression Results with Autoregressive Term, Monthly Industry Portfolio Excess Returns,
1960:01–2012:12

The table reports ordinary least squares estimates of $b_{i,k}^{\text{IND}}$ ($k = 1, 2, 3$) and b_i^{AR} and the R^2 statistic for the predictive regression model,

$$R_{i,t+1} = a_i + \sum_{k=1}^3 b_{i,k}^{\text{IND}} \hat{F}_{k,t}^{\text{IND}} + b_i^{\text{AR}} R_{i,t} + \varepsilon_{i,t+1},$$

where $R_{i,t+1}$ is the excess return on industry portfolio i and $\hat{F}_{1,t}^{\text{IND}}$, $\hat{F}_{2,t}^{\text{IND}}$, and $\hat{F}_{3,t}^{\text{IND}}$ are the first three principal component extracted from all 30 industry portfolio excess returns. The principal components are standardized to have zero mean and unit variance. Brackets report heteroskedasticity-robust t -statistics; *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively. Parentheses below the R^2 statistics reports adjusted R^2 statistics.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i	$\hat{b}_{i,1}^{\text{IND}}$	$\hat{b}_{i,2}^{\text{IND}}$	$\hat{b}_{i,3}^{\text{IND}}$	\hat{b}_i^{AR}	R^2	i	$\hat{b}_{i,1}^{\text{IND}}$	$\hat{b}_{i,2}^{\text{IND}}$	$\hat{b}_{i,3}^{\text{IND}}$	\hat{b}_i^{AR}	R^2
FOOD	0.25 [0.61]	−0.50 [−1.77]*	−0.24 [−1.28]	−0.01 [−0.05]	1.85% (1.22%)	CARRY	0.55 [1.14]	−0.07 [−0.25]	−0.58 [−2.26]**	0.06 [0.82]	2.77% (2.16%)
BEER	0.93 [2.59]***	−0.94 [−3.58]***	−0.06 [−0.26]	−0.17 [−2.10]**	2.75% (2.13%)	MINES	0.77 [1.54]	0.03 [0.06]	−0.13 [−0.39]	−0.04 [−0.60]	0.76% (0.14%)
SMOKE	0.33 [0.97]	−0.49 [−1.60]	0.19 [0.59]	−0.01 [−0.18]	0.86% (0.24%)	COAL	−0.37 [−0.57]	0.07 [0.12]	−1.46 [−2.49]**	0.13 [1.69]*	2.01% (1.39%)
GAMES	1.82 [2.85]***	−0.19 [−0.55]	−0.87 [−2.67]***	−0.08 [−0.96]	4.34% (3.74%)	OIL	0.30 [0.71]	0.46 [1.51]	−0.29 [−0.85]	−4.70 [−0.48]	1.19% (0.56%)
BOOKS	0.49 [1.03]	−0.47 [−1.68]*	−0.50 [−2.02]**	0.10 [1.21]	5.11% (4.51%)	UTIL	−0.52 [−1.95]*	0.00 [0.01]	−0.58 [−2.45]**	0.21 [2.83]***	1.74% (1.12%)
HSHLD	1.02 [2.73]***	−0.83 [−3.61]***	−0.32 [−1.52]	−0.16 [−1.89]*	3.24% (2.63%)	TELCM	−0.14 [−0.45]	−0.23 [−1.04]	−0.23 [−1.09]	0.06 [0.90]	0.75% (0.12%)

Table AI (continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i	$\hat{b}_{i,1}^{\text{IND}}$	$\hat{b}_{i,2}^{\text{IND}}$	$\hat{b}_{i,3}^{\text{IND}}$	\hat{b}_i^{AR}	R^2	i	$\hat{b}_{i,1}^{\text{IND}}$	$\hat{b}_{i,2}^{\text{IND}}$	$\hat{b}_{i,3}^{\text{IND}}$	\hat{b}_i^{AR}	R^2
CLTHS	0.16 [0.26]	-0.48 [-1.55]	-0.53 [-1.68]*	0.14 [1.48]	4.33% (3.73%)	SERVS	0.05 [0.08]	-0.49 [-1.60]	-0.22 [-0.74]	0.07 [0.71]	1.23% (0.60%)
HLTH	0.63 [1.58]	-0.72 [-2.75]***	-0.12 [-0.56]	-0.12 [-1.57]	1.83% (1.21%)	BUSEQ	0.10 [0.19]	-0.43 [-1.32]	0.04 [0.10]	0.07 [0.78]	0.91% (0.29%)
CHEMS	-0.09 [-0.19]	-0.27 [-0.94]	-0.51 [-2.25]**	0.07 [0.84]	1.24% (0.61%)	PAPER	0.89 [1.81]*	-0.49 [-1.97]**	-0.52 [-2.46]**	-0.12 [-1.37]	2.64% (2.03%)
TXTLS	1.41 [2.17]**	-0.41 [-1.25]	-0.94 [-2.79]***	-0.02 [-0.13]	5.33% (4.73%)	TRANS	0.15 [0.29]	-0.29 [-1.12]	-0.34 [-1.43]	0.07 [0.85]	1.45% (0.83%)
CNSTR	0.80 [1.37]	-0.46 [-1.51]	-0.46 [-1.83]*	-0.001 [-0.01]	2.84% (2.22%)	WHLSL	0.70 [1.36]	-0.15 [-0.58]	-0.53 [-2.44]**	0.04 [0.46]	3.53% (2.92%)
STEEL	1.39 [2.08]**	0.44 [0.96]	-0.21 [-0.60]	-0.14 [-1.28]	1.09% (0.46%)	RTAIL	-0.08 [-0.17]	-0.61 [-2.15]**	-0.20 [-0.79]	0.12 [1.28]	3.27% (2.66%)
FABPR	0.25 [0.33]	-0.05 [-0.14]	-0.31 [-1.12]	0.07 [0.53]	1.42% (0.80%)	MEALS	0.55 [1.19]	-0.68 [-2.52]**	-0.88 [-3.69]***	0.07 [0.82]	5.78% (5.18%)
ELCEQ	1.15 [2.04]**	-0.26 [-0.86]	-0.50 [-1.69]*	-0.14 [-1.50]	1.46% (0.84%)	FIN	-0.72 [-1.25]	-0.20 [-0.72]	-0.47 [-1.99]**	0.25 [2.41]**	3.16% (2.55%)
AUTOS	1.09 [2.15]**	-0.18 [-0.48]	-0.74 [-2.30]**	-0.03 [-0.42]	3.03% (2.42%)	OTHER	0.52 [1.12]	-0.14 [-0.56]	-0.48 [-2.20]**	0.04 [0.56]	2.43% (1.81%)

Table AII
Principal Component Predictive Regression Results with Lagged Market Excess Return, Monthly Industry Portfolio Excess Returns, 1960:01–2012:12

The table reports ordinary least squares estimates of $b_{i,k}^{\text{IND}}$ ($k = 1, 2, 3$) and b_i^{MKT} and the R^2 statistic for the predictive regression model,

$$R_{i,t+1} = a_i + \sum_{k=1}^3 b_{i,k}^{\text{IND}} \hat{F}_{k,t}^{\text{IND}} + b_i^{\text{MKT}} \text{MKT}_t + \varepsilon_{i,t+1},$$

where $R_{i,t+1}$ is the excess return on industry portfolio i ; $\hat{F}_{1,t}^{\text{IND}}$, $\hat{F}_{2,t}^{\text{IND}}$, and $\hat{F}_{3,t}^{\text{IND}}$ are the first three principal component extracted from all 30 industry portfolio excess returns; and MKT_t is the excess return on the S&P 500 index. The principal components and market return are standardized to have zero mean and unit variance. Brackets report heteroskedasticity-robust t -statistics; *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively. Parentheses below the R^2 statistics reports adjusted R^2 statistics.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i	$\hat{b}_{i,1}^{\text{IND}}$	$\hat{b}_{i,2}^{\text{IND}}$	$\hat{b}_{i,3}^{\text{IND}}$	\hat{b}_i^{MKT}	R^2	i	$\hat{b}_{i,1}^{\text{IND}}$	$\hat{b}_{i,2}^{\text{IND}}$	$\hat{b}_{i,3}^{\text{IND}}$	\hat{b}_i^{MKT}	R^2
FOOD	1.66 [2.66]***	−0.52 [−2.47]**	−0.17 [−0.98]	−1.49 [−2.34]**	2.79% (2.17%)	CARRY	0.35 [0.35]	−0.04 [−0.15]	−0.61 [−2.30]**	0.54 [0.54]	2.72% (2.11%)
BEER	0.99 [1.22]	−0.61 [−2.60]***	−0.17 [−0.77]	−0.71 [−0.86]	1.98% (1.36%)	MINES	0.72 [0.72]	−0.14 [−0.36]	−0.20 [−0.63]	−0.16 [−0.16]	0.70% (0.07%)
SMOKE	2.99 [3.24]***	−0.53 [−2.06]**	0.30 [1.10]	−2.82 [−2.95]***	2.56% (1.94%)	COAL	1.06 [0.57]	0.57 [1.07]	−0.92 [−1.66]*	−0.77 [−0.39]	1.47% (0.85%)
GAMES	1.64 [1.56]	−0.20 [−0.59]	−0.72 [−2.31]**	−0.36 [−0.35]	4.21% (3.60%)	OIL	0.66 [0.82]	0.36 [1.42]	−0.38 [−1.68]*	−0.55 [−0.69]	1.22% (0.59%)
BOOKS	1.23 [1.53]	−0.51 [−1.89]*	−0.57 [−2.43]**	−0.21 [−0.27]	4.88% (4.27%)	UTIL	−0.77 [−1.21]	−0.09 [−0.50]	−0.17 [−0.94]	0.82 [1.26]	0.52% (−0.11%)
HSHLD	0.76 [1.06]	−0.59 [−2.62]***	−0.31 [−1.42]	−0.36 [−0.50]	2.68% (2.06%)	TELCM	−0.27 [−0.35]	−0.24 [−1.14]	−0.25 [−1.11]	0.35 [0.44]	0.60% (−0.03%)

Table AII (continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i	$\hat{b}_{i,1}^{\text{IND}}$	$\hat{b}_{i,2}^{\text{IND}}$	$\hat{b}_{i,3}^{\text{IND}}$	\hat{b}_i^{MKT}	R^2	i	$\hat{b}_{i,1}^{\text{IND}}$	$\hat{b}_{i,2}^{\text{IND}}$	$\hat{b}_{i,3}^{\text{IND}}$	\hat{b}_i^{MKT}	R^2
CLTHS	1.31 [1.30]	-0.53 [-1.69]*	-0.69 [-2.24]**	-0.41 [-0.41]	3.89% (3.28%)	SERVS	1.14 [1.00]	-0.49 [-1.58]	-0.25 [-0.77]	-0.73 [-0.62]	1.20% (0.57%)
HLTH	0.94 [1.26]	-0.53 [-2.38]**	-0.17 [-0.84]	-0.81 [-1.08]	1.58% (0.96%)	BUSEQ	-0.08 [-0.06]	-0.35 [-1.04]	-0.10 [-0.24]	0.58 [0.44]	0.82% (0.19%)
CHEMS	0.49 [0.61]	-0.21 [-0.71]	-0.47 [-2.01]**	-0.23 [-0.29]	1.14% (0.52%)	PAPER	0.49 [0.66]	-0.50 [-1.96]**	-0.50 [-2.26]**	-0.17 [-0.22]	2.32% (1.70%)
TXTLS	0.91 [0.89]	-0.41 [-1.23]	-0.93 [-2.76]***	0.41 [0.41]	5.34% (4.74%)	TRANS	0.82 [0.97]	-0.27 [-1.07]	-0.36 [-1.56]	-0.34 [-0.41]	1.37% (0.74%)
CNSTR	0.70 [0.81]	-0.46 [-1.49]	-0.46 [-1.78]*	0.101 [0.12]	2.84% (2.22%)	WHLSL	1.89 [2.28]**	-0.17 [-0.66]*	-0.48 [-2.13]**	-1.02 [-1.23]	3.76% (3.15%)
STEEL	0.05 [0.05]	0.04 [0.10]	-0.22 [-0.59]	0.56 [0.49]	0.76% (0.13%)	RTAIL	0.41 [0.54]	-0.74 [-2.89]***	-0.35 [-1.46]	0.06 [0.09]	2.99% (2.38%)
FABPR	0.43 [0.46]	0.08 [0.24]	-0.33 [-1.16]	0.22 [0.23]	1.38% (0.75%)	MEALS	1.80 [2.04]**	-0.78 [-2.91]***	-0.88 [-3.65]***	-0.94 [-1.12]	5.84% (5.24%)
ELCEQ	0.35 [0.37]	-0.32 [-1.00]	-0.41 [-1.37]	0.05 [0.05]	1.06% (0.43%)	FIN	0.60 [0.75]	-0.36 [-1.34]	-0.42 [-1.76]*	-0.09 [-0.12]	1.86% (1.24%)
AUTOS	0.22 [0.21]	-0.19 [-0.54]	-0.73 [-2.21]**	0.74 [0.73]	3.10% (2.48%)	OTHER	1.44 [1.72]*	-0.16 [-0.66]	-0.44 [-1.93]*	-0.73 [-0.87]	2.51% (1.89%)

Table AIII
Target-Relevant Factor Predictive Regression Results with Autoregressive Term, Monthly Industry Portfolio Excess Returns, 1960:01–2012:12

The table reports ordinary least squares estimates of b_i^{IND} and b_i^{AR} and the R^2 statistic for the predictive regression model,

$$R_{i,t+1} = a_i + b_i^{\text{IND}} \hat{G}_{i,t}^{\text{IND}} + b_i^{\text{AR}} R_{i,t} + \varepsilon_{i,t+1},$$

where $R_{i,t+1}$ is the excess return on industry portfolio i and $\hat{G}_{i,t}^{\text{IND}}$ is the target-relevant factor extracted from all 30 industry portfolio excess returns. The target-relevant factor is estimated using the Kelly and Pruitt (2012) three-pass regression filter. The target-relevant factor is standardized to have zero mean and unit variance. Parentheses report heteroskedasticity-robust t -statistics; *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively. Parentheses below the R^2 statistics reports adjusted R^2 statistics.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i	\hat{b}_i^{IND}	\hat{b}_i^{AR}	R^2	i	\hat{b}_i^{IND}	\hat{b}_i^{AR}	R^2	i	\hat{b}_i^{IND}	\hat{b}_i^{AR}	R^2
FOOD	0.70 [3.53]***	0.05 [0.87]	2.96% (2.65%)	CNSTR	1.06 [3.52]***	0.08 [1.61]	4.21% (3.91%)	TELCM	0.78 [3.48]***	0.01 [0.11]	2.84% (2.54%)
BEER	0.77 [3.36]***	0.01 [0.20]	2.19% (1.88%)	STEEL	1.11 [2.80]***	−0.03 [−0.47]	1.98% (1.67%)	SERVS	0.88 [2.77]***	0.03 [0.59]	2.08% (1.77%)
SMOKE	1.14 [3.80]***	0.04 [0.86]	3.66% (3.35%)	FABPR	0.90 [2.82]***	0.03 [0.41]	2.56% (2.26%)	BUSEQ	1.25 [3.74]***	0.02 [0.32]	3.48% (3.18%)
GAMES	1.29 [3.30]***	0.05 [0.95]	4.39% (4.08%)	ELCEQ	0.93 [3.05]***	−0.01 [−0.24]	2.10% (1.79%)	PAPER	0.93 [3.63]***	0.01 [0.16]	3.31% (3.01%)
BOOKS	0.88 [2.98]***	0.12 [2.23]**	5.63% (5.33%)	AUTOS	1.32 [3.23]***	0.02 [0.35]	4.20% (3.90%)	TRANS	0.92 [3.56]***	0.04 [0.89]	3.05% (2.74%)
HSHLD	0.83 [3.53]***	0.03 [0.62]	3.25% (2.94%)	CARRY	1.00 [3.67]***	0.07 [1.51]	3.73% (3.42%)	WHLSL	0.99 [4.18]***	0.08 [1.44]	4.67% (4.37%)
CLTHS	1.11 [3.25]***	0.09 [1.84]*	5.44% (5.14%)	MINES	1.16 [3.81]***	0.04 [0.75]	2.39% (2.09%)	RTAIL	0.85 [3.20]***	0.08 [1.73]*	4.02% (3.72%)
HLTH	0.76 [3.56]***	−0.02 [−0.03]	2.29% (1.98%)	COAL	1.81 [2.73]***	−0.04 [−0.73]	2.83% (2.53%)	MEALS	1.34 [4.86]***	0.09 [1.69]*	6.79% (6.49%)
CHEMS	0.82 [3.14]***	0.02 [0.47]	2.36% (2.05%)	OIL	0.94 [4.40]***	−0.04 [−0.80]	2.98% (2.67%)	FIN	0.85 [3.28]***	0.09 [1.78]*	4.06% (3.75%)
TXTLS	1.55 [4.12]***	0.05 [0.60]	6.14% (5.84%)	UTIL	0.81 [4.39]***	0.07 [1.66]*	4.46% (4.15%)	OTHER	0.93 [3.86]***	0.05 [1.05]	3.55% (3.24%)

Table AIV
Target-Relevant Factor Predictive Regression Results with Lagged Market Excess Return, Monthly Industry Portfolio Excess Returns, 1960:01–2012:12

The table reports ordinary least squares estimates of b_i^{IND} and b_i^{MKT} and the R^2 statistic for the predictive regression model,

$$R_{i,t+1} = a_i + b_i^{\text{IND}} \hat{G}_{i,t}^{\text{IND}} + b_i^{\text{MKT}} \text{MKT}_t + \varepsilon_{i,t+1},$$

where $R_{i,t+1}$ is the excess return on industry portfolio i , $\hat{G}_{i,t}^{\text{IND}}$ is the target-relevant factor extracted from all 30 industry portfolio excess returns, and MKT_t is the excess return on the S&P 500 index. The target-relevant factor is estimated using the Kelly and Pruitt (2012) three-pass regression filter. The target-relevant factor and market excess return are standardized to have zero mean and unit variance. Parentheses report heteroskedasticity-robust t -statistics; *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively. Parentheses below the R^2 statistics reports adjusted R^2 statistics.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i	\hat{b}_i^{IND}	\hat{b}_i^{MKT}	R^2	i	\hat{b}_i^{IND}	\hat{b}_i^{MKT}	R^2	i	\hat{b}_i^{IND}	\hat{b}_i^{MKT}	R^2
FOOD	0.73 [3.74]***	0.10 [0.34]	2.79% (2.48%)	CNSTR	1.05 [3.55]***	0.68 [1.87]*	4.36% (4.06%)	TELCM	0.79 [3.69]***	0.04 [0.15]	2.85% (2.54%)
BEER	0.77 [3.37]***	0.32 [1.11]	2.41% (2.10%)	STEEL	0.94 [2.52]**	0.22 [0.51]	1.96% (1.65%)	SERVS	0.91 [3.04]***	0.20 [0.49]	2.05% (1.74%)
SMOKE	1.19 [3.99]***	0.27 [0.75]	3.64% (3.34%)	FABPR	0.89 [3.13]***	0.26 [0.64]	2.60% (2.30%)	BUSEQ	1.23 [3.81]***	0.37 [0.88]	3.62% (3.32%)
GAMES	1.23 [3.75]***	0.88 [1.98]**	4.92% (4.62%)	ELCEQ	0.88 [3.00]***	0.19 [0.48]	2.14% (1.83%)	PAPER	0.91 [3.56]***	0.22 [0.71]	3.41% (3.11%)
BOOKS	1.02 [3.91]***	0.78 [2.15]**	5.39% (5.09%)	AUTOS	1.21 [3.27]***	0.61 [1.46]	4.60% (4.29%)	TRANS	0.95 [3.83]***	0.26 [0.78]	3.03% (2.72%)
HSHLD	0.84 [3.60]***	0.40 [1.35]	3.56% (3.25%)	CARRY	1.00 [3.74]***	0.59 [1.66]*	3.80% (3.50%)	WHLSL	1.05 [4.45]***	0.44 [1.24]	4.58% (4.28%)
CLTHS	1.29 [4.15]***	0.61 [1.53]	5.26% (4.96%)	MINES	1.05 [3.00]***	0.29 [0.55]	2.33% (2.02%)	RTAIL	0.98 [4.00]***	0.47 [1.51]	3.89% (3.59%)
HLTH	0.76 [3.62]***	0.12 [0.33]	2.32% (2.02%)	COAL	1.88 [2.98]***	-0.79 [-1.23]	3.03% (2.72%)	MEALS	1.47 [5.48]***	0.52 [1.54]	6.59% (6.29%)
CHEMS	0.83 [3.19]***	0.06 [0.17]	2.31% (2.00%)	OIL	1.03 [4.59]***	-0.43 [-1.25]	3.15% (2.85%)	FIN	0.94 [3.63]***	0.32 [0.88]	3.51% (3.20%)
TXTLS	1.50 [3.87]***	0.99 [2.05]***	6.99% (6.69%)	UTIL	0.80 [4.31]***	0.08 [0.35]	3.99% (3.69%)	OTHER	0.97 [3.93]***	0.31 [0.84]	3.50% (3.19%)

Table AV
First-Pass Coefficient Estimates for the Three-Pass Regression Filter, Monthly Industry Portfolio Excess Returns, 1960:01–2012:12

The table reports ordinary least squares estimates of $\phi_{1,j}^i$ for the bivariate regression model,

$$R_{j,t} = \phi_{0,j}^i + \phi_{1,j}^i R_{i,t+1} + e_{j,t}^i,$$

where $R_{j,t}$ is the excess return on industry portfolio j ; 0.00 indicates less than 0.005 in absolute value.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	<i>i</i>									
<i>j</i>	FOOD	BEER	SMOKE	GAMES	BOOKS	HSHLD	CLTHS	HLTH	CHEMS	TXTLS
FOOD	0.07	0.10	0.05	0.07	0.10	0.09	0.07	0.04	0.03	0.08
BEER	0.02	0.03	0.04	0.07	0.09	0.08	0.06	0.03	0.03	0.09
SMOKE	0.09	0.07	0.06	0.04	0.11	0.05	0.05	0.03	0.00	0.07
GAMES	0.11	0.06	0.03	0.15	0.23	0.12	0.13	0.05	0.02	0.16
BOOKS	0.10	0.09	0.06	0.18	0.20	0.14	0.14	0.10	0.08	0.14
HSHLD	0.06	0.07	0.02	0.08	0.13	0.07	0.07	0.03	0.01	0.08
CLTHS	0.12	0.11	0.07	0.16	0.19	0.18	0.18	0.08	0.11	0.20
HLTH	0.07	0.06	0.03	0.08	0.12	0.07	0.08	0.01	0.02	0.08
CHEMS	0.01	0.04	0.04	0.11	0.13	0.06	0.11	0.01	0.05	0.13
TXTLS	0.11	0.04	0.09	0.16	0.18	0.13	0.14	0.02	0.08	0.16
CNSTR	0.04	0.03	0.04	0.15	0.15	0.08	0.13	0.02	0.06	0.15
STEEL	−0.01	0.01	0.01	0.11	0.11	−0.01	0.05	−0.05	0.01	0.12
FABPR	0.05	0.03	0.02	0.14	0.15	0.05	0.10	0.00	0.05	0.14
ELCEQ	0.02	0.03	0.01	0.13	0.14	0.07	0.07	0.03	0.03	0.11
AUTOS	0.08	0.05	0.05	0.15	0.17	0.10	0.13	0.01	0.09	0.20
CARRY	0.09	0.09	0.10	0.12	0.15	0.10	0.12	0.04	0.07	0.11
MINES	−0.07	−0.02	−0.04	0.07	0.07	−0.03	0.03	−0.09	0.00	0.07
COAL	−0.15	−0.10	−0.02	0.03	0.03	−0.10	−0.03	−0.10	−0.06	−0.01
OIL	−0.05	−0.03	−0.01	0.03	0.01	0.00	0.00	−0.04	−0.05	0.01
UTIL	0.08	0.05	0.09	0.06	0.08	0.06	0.06	0.07	0.02	0.06
TELCM	0.02	0.06	0.00	0.09	0.11	0.07	0.05	0.02	0.03	0.10
SERVS	0.06	0.08	−0.03	0.16	0.22	0.11	0.16	0.08	0.06	0.16
BUSEQ	0.06	0.06	0.00	0.14	0.21	0.06	0.15	0.03	0.05	0.15
PAPER	0.04	0.04	0.02	0.10	0.12	0.06	0.09	0.01	0.03	0.12
TRANS	0.06	0.06	0.07	0.13	0.15	0.11	0.12	0.04	0.06	0.14
WHLST	0.06	0.06	0.04	0.12	0.15	0.06	0.12	0.04	0.01	0.11
RTAIL	0.11	0.08	0.02	0.12	0.19	0.15	0.15	0.07	0.09	0.17
MEALS	0.10	0.11	0.04	0.12	0.18	0.13	0.15	0.06	0.06	0.14
FIN	0.09	0.09	0.07	0.15	0.18	0.14	0.13	0.05	0.07	0.17
OTHER	0.08	0.07	0.06	0.12	0.16	0.10	0.13	0.05	0.04	0.13

Table AV (continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
j	i									
	CNSTR	STEEL	FABPR	ELCEQ	AUTOS	CARRY	MINES	COAL	OIL	UTIL
FOOD	0.08	0.03	0.04	0.04	0.06	0.06	0.02	0.00	-0.02	0.02
BEER	0.06	0.03	0.03	0.03	0.06	0.04	0.02	-0.03	-0.05	-0.08
SMOKE	0.04	0.00	0.00	0.00	0.03	0.04	0.05	-0.04	-0.04	0.04
GAMES	0.09	0.03	0.06	0.06	0.10	0.13	0.03	0.02	0.00	-0.01
BOOKS	0.15	0.07	0.12	0.07	0.13	0.14	0.06	0.05	0.05	0.02
HSHLD	0.07	0.03	0.04	0.02	0.04	0.06	0.04	-0.01	-0.03	-0.04
CLTHS	0.16	0.06	0.11	0.08	0.15	0.14	0.06	0.04	0.05	0.00
HLTH	0.08	0.04	0.05	0.04	0.05	0.05	0.03	0.00	-0.04	-0.04
CHEMS	0.10	0.06	0.09	0.04	0.10	0.09	0.04	0.03	0.04	-0.02
TXTLS	0.13	0.06	0.09	0.05	0.14	0.14	0.04	0.05	0.08	-0.01
CNSTR	0.12	0.06	0.10	0.05	0.12	0.12	0.07	0.02	0.04	-0.07
STEEL	0.06	0.04	0.07	0.03	0.09	0.10	0.03	0.02	0.05	0.01
FABPR	0.10	0.06	0.11	0.06	0.11	0.13	0.07	0.02	0.06	0.02
ELCEQ	0.10	0.06	0.09	0.03	0.09	0.11	0.05	0.03	0.07	0.00
AUTOS	0.13	0.07	0.09	0.06	0.11	0.14	0.09	0.05	0.07	0.06
CARRY	0.13	0.06	0.09	0.05	0.09	0.13	0.09	0.02	0.10	0.06
MINES	0.04	0.04	0.07	0.00	0.05	0.05	0.02	0.02	0.02	-0.13
COAL	-0.03	0.04	0.06	-0.03	0.01	0.00	-0.01	0.05	-0.02	-0.11
OIL	0.00	0.02	0.02	-0.03	0.01	0.02	0.03	-0.02	-0.01	-0.04
UTIL	0.08	0.04	0.05	0.05	0.06	0.06	0.04	-0.01	0.00	0.06
TELCM	0.09	0.03	0.05	0.03	0.08	0.08	0.01	0.02	0.00	0.10
SERVS	0.14	0.07	0.12	0.09	0.15	0.15	0.07	0.03	0.00	0.03
BUSEQ	0.13	0.08	0.12	0.09	0.15	0.14	0.08	0.02	0.02	0.06
PAPER	0.09	0.05	0.08	0.03	0.08	0.09	0.05	0.03	0.02	0.00
TRANS	0.13	0.07	0.11	0.05	0.11	0.14	0.06	0.01	0.06	0.01
WHLST	0.09	0.05	0.09	0.05	0.09	0.12	0.04	0.01	0.01	-0.06
RTAIL	0.15	0.06	0.10	0.08	0.15	0.11	0.06	0.03	0.03	0.03
MEALS	0.12	0.05	0.07	0.08	0.13	0.11	0.08	0.01	-0.01	-0.01
FIN	0.16	0.10	0.12	0.09	0.13	0.13	0.05	0.02	0.05	0.06
OTHER	0.11	0.06	0.08	0.05	0.10	0.12	0.05	0.01	0.05	0.05

Table AV (continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>j</i>	<i>i</i>									
	TELCM	SERVS	BUSEQ	PAPER	TRANS	WHLSL	RTAIL	MEALS	FIN	OTHER
FOOD	0.04	0.04	0.04	0.07	0.06	0.07	0.09	0.09	0.06	0.06
BEER	-0.03	0.05	0.05	0.04	0.02	0.07	0.07	0.07	0.03	0.06
SMOKE	-0.02	-0.01	-0.03	0.03	0.02	0.03	0.07	0.04	0.03	0.01
GAMES	0.01	0.05	0.03	0.06	0.06	0.16	0.10	0.17	0.08	0.12
BOOKS	0.09	0.08	0.10	0.12	0.12	0.20	0.11	0.16	0.14	0.15
HSHLD	-0.01	0.05	0.04	0.05	0.03	0.10	0.08	0.09	0.06	0.08
CLTHS	0.03	0.07	0.05	0.14	0.12	0.17	0.12	0.19	0.14	0.17
HLTH	0.01	0.05	0.07	0.04	0.04	0.08	0.10	0.08	0.05	0.07
CHEMS	0.00	0.03	0.04	0.05	0.06	0.13	0.06	0.08	0.06	0.11
TXTLS	0.03	0.05	0.04	0.12	0.11	0.18	0.07	0.14	0.12	0.15
CNSTR	0.00	0.04	0.04	0.07	0.08	0.16	0.08	0.12	0.09	0.14
STEEL	-0.01	0.00	0.01	0.00	0.02	0.14	-0.02	0.04	0.03	0.09
FABPR	0.01	0.04	0.04	0.05	0.08	0.14	0.06	0.10	0.09	0.12
ELCEQ	0.01	0.05	0.05	0.02	0.05	0.14	0.04	0.12	0.09	0.11
AUTOS	0.01	0.03	0.03	0.07	0.08	0.17	0.09	0.12	0.10	0.12
CARRY	-0.04	0.05	0.03	0.08	0.08	0.18	0.04	0.13	0.09	0.14
MINES	-0.08	-0.01	0.01	-0.04	0.02	0.08	-0.04	0.01	-0.03	0.04
COAL	-0.09	0.01	0.04	-0.10	-0.01	0.04	-0.05	-0.07	-0.04	0.04
OIL	-0.06	-0.02	0.01	-0.05	-0.01	0.02	-0.03	-0.03	-0.01	0.02
UTIL	0.06	0.04	0.06	0.03	0.06	0.10	0.05	0.06	0.07	0.07
TELCM	0.05	0.03	0.05	0.05	0.05	0.07	0.05	0.08	0.07	0.05
SERVS	0.07	0.08	0.08	0.10	0.11	0.19	0.14	0.18	0.13	0.16
BUSEQ	0.06	0.07	0.07	0.09	0.08	0.17	0.13	0.15	0.12	0.13
PAPER	-0.01	0.03	0.03	0.03	0.05	0.12	0.06	0.08	0.08	0.10
TRANS	0.01	0.05	0.04	0.09	0.09	0.15	0.06	0.13	0.09	0.14
WHLSL	0.01	0.06	0.07	0.04	0.06	0.15	0.08	0.13	0.06	0.11
RTAIL	0.07	0.07	0.07	0.12	0.11	0.15	0.14	0.15	0.10	0.12
MEALS	-0.04	0.06	0.04	0.09	0.08	0.16	0.13	0.17	0.07	0.11
FIN	0.09	0.08	0.08	0.11	0.12	0.17	0.11	0.14	0.14	0.15
OTHER	0.02	0.06	0.05	0.05	0.11	0.17	0.10	0.12	0.13	0.12

Table AVI
Adaptive LASSO Predictive Regression Results, Monthly Industry Portfolio Excess Returns,
1960:01–2012:12

The table reports adaptive LASSO estimates of $b_{i,j}$ for the general predictive regression model,

$$R_{i,t+1} = a_i + \sum_{j=1}^{42} b_{i,j} z_{j,t} + \varepsilon_{i,t+1},$$

where $R_{i,t+1}$ is the excess return on industry portfolio i and $z_{j,t}$ is one of 30 industry excess returns or 12 economic variables listed above; – indicates that the lagged industry portfolio return was not selected by the adaptive LASSO; * indicates significance according to bootstrapped 90% confidence intervals.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
j	i									
	FOOD	BEER	SMOKE	GAMES	BOOKS	HSHLD	CLTHS	HLTH	CHEMS	TXTLS
FOOD	–	0.10*	–	–	–	–	–	–	–	–0.05*
BEER	–0.02	–	–	–	–	–	–	–	–	–
SMOKE	–	–	–	–	–	–	–	–	–	–
GAMES	–	–	–	–	–	–	–	–	–	–
BOOKS	0.01	–	–	0.18*	0.03	0.02	0.07	0.07*	–	–
HSHLD	–	–	–	–	–	–	–0.07*	–	–	–0.05
CLTHS	–	0.01	–	–	–	0.10*	0.05	–	0.05*	0.04
HLTH	0.02	–	–	–	–	–	–	–	–	–
CHEMS	–	–	–	–	–	–	0.14*	–	–	–
TXTLS	–	–	–	–	–	–	–	–	–	–
CNSTR	–0.06*	–	–	–	–	–	–	–	–	–
STEEL	–	–	–	–	–	–0.04*	–0.07*	–	–	–
FABPR	0.06*	–	–	–	–	–	–	–	–	0.16*
ELCEQ	–	–	–	–	–	–	–0.18*	–	–	–0.11*
AUTOS	–	–	–	–	–	–	–	–	–	0.06
CARRY	0.02	–	0.12*	–	–	–	0.02	–	–	–
MINES	–	–	–0.02	–	–	–	–	–0.04*	–	–
COAL	–0.04*	–0.04*	–0.02	–	–	–0.04*	–0.05*	–0.02	–	–0.05*
OIL	–	–	–	–	–0.08*	–	–0.10*	–	–0.06*	–0.16*
UTIL	0.05	–	0.18*	–	–	–	0.02	0.04*	–	–
TELCM	–0.01	–	–	–	–	–	–0.10*	–	–	–
SERVS	–	–	–0.12*	–	0.02	–	0.09	–	–	–
BUSEQ	–	–	–	–	0.06*	–	0.12*	–	–	–
PAPER	–	–	–0.02	–	–	–	–	–	–	–
TRANS	–	–	–	–	–	–	–	–	–	–
WHLST	–	–	–	–	–	–0.05*	–	–	–	–0.05
RTAIL	0.07*	–	–	–	0.04	–	0.01	–	–	0.11*
MEALS	–	–	–	–	–	–	–	–	–	–
FIN	0.04	–	0.03	0.07*	0.09*	0.04	0.13	–	–	0.25*
OTHER	–	–	–	–	–	–	–	–	–	–
DP	0.16*	–	–	–	0.01*	–	–	0.02*	–	–
DY	–0.14*	–	–	–	–	0.01	–	–	0.01	0.02*
EP	0.01*	–	–	–	–	–	0.01	0.01	–	–
RVOL	0.08*	0.01	0.04	0.05*	0.08*	0.01	0.11*	0.05*	0.06*	0.09*
BM	–0.04*	–	–	–	–	–0.01	–	–0.03*	–	–
NTIS	–	–0.10*	–0.14*	–	–	–	–	–	–	–0.12*
TBL	–	–	–	–	–0.02*	–0.14*	–0.24*	–	–0.11*	–0.24*
LTR	0.20*	0.02	–	–	0.15*	0.08*	0.16*	0.06	0.15*	0.20*
TMS	–	–	–	–	–	–	–	–	–	–
DFY	–	–	–	–	–	–	0.62	–	–	–
DFR	0.33*	0.17*	0.06	–	0.02	0.25*	0.18	0.13*	0.20*	–
INFL	–	–	0.35*	–	–	–	–	–	–	1.18*

Table AVI (continued)

[illegible]

Table AVI (continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>j</i>	<i>i</i>									
	TELCM	SERVS	BUSEQ	PAPER	TRANS	WHLST	RTAIL	MEALS	FIN	OTHER
FOOD	—	—	—	—	—	−0.12*	—	—	—	—
BEER	−0.03*	—	—	—	−0.05	—	—	—	—	—
SMOKE	—	—	−0.09*	—	−0.01	−0.01	—	—	—	−0.03*
GAMES	—	—	−0.04*	—	−0.07	−0.01	—	—	—	—
BOOKS	0.06*	—	0.17*	0.02	0.15*	0.17*	—	0.09	0.02	—
HSHLD	—	—	—	—	−0.09	—	—	—	—	—
CLTHS	—	—	—	0.01	—	—	—	0.11*	—	0.03
HLTH	—	—	—	—	−0.01	—	—	—	—	—
CHEMS	—	—	—	—	—	—	0.02	—	—	—
TXTLS	—	—	—	—	—	—	—	—	—	—
CNSTR	−0.07*	—	−0.06*	—	−0.02	—	—	—	—	—
STEEL	—	—	—	—	−0.07*	—	−0.10*	−0.08*	—	—
FABPR	—	—	—	—	0.15*	—	—	—	—	—
ELCEQ	—	—	—	−0.02*	−0.08	—	−0.06*	—	—	—
AUTOS	—	—	−0.02*	—	—	—	—	—	—	—
CARRY	—	—	—	—	—	0.03	—	—	—	—
MINES	—	—	—	—	—	—	—	—	—	—
COAL	—	—	—	−0.02*	—	—	—	−0.05*	—	—
OIL	−0.04*	—	−0.05	−0.06*	−0.13*	−0.13*	−0.05	−0.09*	—	−0.04*
UTIL	0.04	—	0.11*	—	0.02	0.10*	—	—	—	—
TELCM	—	—	—	—	−0.04	−0.10*	—	—	—	−0.03*
SERVS	—	—	—	—	0.05	—	—	0.04	—	0.03
BUSEQ	0.01	—	—	—	—	0.05	0.11*	0.06	—	—
PAPER	—	—	—	—	—	—	—	—	—	—
TRANS	—	—	−0.02	—	—	—	—	—	—	—
WHLST	—	—	—	—	−0.08	—	—	—	—	—
RTAIL	0.06*	—	—	—	0.03	—	0.06*	—	—	—
MEALS	−0.10*	—	—	—	—	—	—	—	—	—
FIN	0.12*	0.10*	0.11*	0.08*	0.17*	0.11*	0.09*	0.05	0.08*	0.14*
OTHER	—	—	—	—	0.08	—	—	—	—	—
DP	0.02*	0.02*	—	—	—	0.01	0.01	0.01	0.01*	0.01*
DY	—	—	0.02	—	0.02*	—	—	—	—	—
EP	0.01*	—	—	—	0.02*	0.01	—	0.01	—	0.01*
RVOL	0.06*	0.01*	0.03	0.05*	0.10*	0.05*	0.13*	0.07*	—	0.03
BM	−0.03*	−0.01	—	—	−0.03*	—	−0.01	—	—	—
NTIS	—	—	—	—	−0.02	−0.07	—	—	—	−0.05
TBL	−0.11*	−0.14*	−0.28*	—	−0.28*	−0.24*	−0.07	−0.21*	—	−0.20*
LTR	0.05	—	—	0.11*	0.22*	0.18*	0.15*	0.13*	0.07*	0.06
TMS	—	—	—	—	—	—	—	—	—	—
DFY	—	—	0.24	—	—	—	—	—	—	—
DFR	—	—	—	0.19*	0.22	0.17*	0.21*	0.20*	—	—
INFL	—	—	—	—	1.06*	—	—	—	—	0.17