

Online Appendix to Accompany

“Mood Beta and Seasonalities in Stock Returns”

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Table A1: Mood Month Return Recurrence, Return Reversal, and Mood Beta: January versus Non-January

This table reports the estimates of Fama-MacBeth regressions to test for return recurrence and reversal effects across mood months in the cross section. For the congruent-mood recurrence effect, we regress high (low) mood month returns across assets on their own past high (low) mood month returns or their own past returns during the two realized high (low) mood months. $RET_{High(Low)}$ refers to the high (or low) mood months identified using the full-sample equal-weighted market excess returns: January and March (September and October). $RET_{RHigh(RLow)}$ refers to the high (or low) mood months identified using the realized equal-weighted excess market returns in a given year. For the noncongruent-mood reversal effect, the independent variables are flipped to forecast the future high (low) mood month returns. The reported coefficient is the time series average of the return responses, reported in percentages for annual lags 2-5. We report the coefficient estimates for predicting returns in all four mood months, January only, or non-January mood months only. The reported Fama-MacBeth t statistics are in parentheses and corrected for heteroscedasticity and autocorrelation using Newey and West (1987). The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests. All variables are defined in the Data Appendix. The sample period is from January 1963 to December 2016.

Panel A: Individual Stocks

<i>Dep. Var.</i>	Congruent-mood Recurrence		Noncongruent-mood Reversal		Mood Beta
	$RET_{High(Low)}$				
<i>Indep. Var. (Lagged 2~5)</i>	$RET_{High(Low)}$	$RET_{RHigh(RLow)}$	$RET_{Low(High)}$	$RET_{RLow(RHigh)}$	$\pm\beta^{Mood}$
	(1)	(2)	(3)	(4)	(5)
<i>All Mood Months</i>	1.82*** (2.65)	3.20*** (2.64)	-5.63*** (-5.77)	-8.65*** (-5.95)	1.47*** (3.78)
<i>January</i>	8.79*** (4.32)	7.38*** (2.69)	-16.35*** (-5.41)	-23.53*** (-5.57)	3.92*** (3.86)
<i>Non-January</i>	-0.50 (0.74)	1.81 (1.41)	-2.06** (-2.32)	-3.68*** (-2.90)	0.66** (2.38)

Panel B: Baker and Wurgler (BW) Portfolios

<i>All Mood Months</i>	43.03*** (4.74)	29.35*** (4.70)	-30.00*** (-3.53)	-26.20*** (-4.27)	2.73*** (5.26)
<i>January</i>	142.02*** (4.87)	82.16*** (4.85)	-61.08* (-1.96)	-79.47*** (-5.01)	8.02*** (4.67)
<i>Non-January</i>	10.04 (1.12)	11.75* (1.73)	-19.64*** (-3.00)	-8.40 (-1.46)	0.97* (1.90)

Panel C: Kelobarju, Linnainmaa, and Nyberg (KLN) Portfolios

<i>All Mood Months</i>	32.40*** (4.36)	26.39*** (4.32)	-22.00*** (-3.09)	-27.00*** (-4.30)	2.95*** (6.03)
<i>January</i>	123.12*** (5.11)	66.50*** (3.66)	-43.99* (-1.81)	-75.38*** (-4.26)	7.77*** (4.48)
<i>Non-January</i>	2.16 (0.29)	13.02** (2.07)	-14.73** (-2.41)	-10.87* (-1.87)	1.34*** (2.82)

Table A2: Mood Weekday Return Recurrence, Return Reversal, and Mood Beta: January versus Non-January

This table reports the estimates of Fama-MacBeth regressions to test for return recurrence and reversal effects across mood weekdays in the cross section. The dependent variable is the asset return on Friday or Monday. For the congruent-mood recurrence effect, we regress high (Friday) or low (Monday) mood weekday returns across assets on their own past average Friday or Monday returns or their own past returns during the realized high or low mood weekdays. $RET_{High(Low)}$ refers to the high (low) mood weekdays identified using the full-sample equal-weighted market excess returns: Friday (Monday). $RET_{RHigh(RLow)}$ refers to the high and low mood weekdays identified using the realized equal-weighted market excess returns in a given week. For the noncongruent-mood reversal effect, the independent variables are switched to forecast the future high (low) mood weekday returns. The reported coefficient is the time series average of the return responses, reported in percentages for week lags 2-10. We report the coefficient estimates for predicting returns in all Mondays and Fridays, those in January only, or those in non-January months. The reported Fama-MacBeth t statistics are in parentheses and corrected for heteroscedasticity and autocorrelation using Newey and West (1987). The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests. All variables are defined in the Data Appendix.

Panel A: Individual Stocks

<i>Dep. Var.</i> <i>Indep. Var. (Lagged 2~10)</i>	Congruent-weekday Recurrence		Noncongruent- weekday Reversal		Mood Beta
	$RET_{High(Low)}$				
	$RET_{High(Low)}$	$RET_{RHigh(RLow)}$	$RET_{Low(High)}$	$RET_{RLow(RHigh)}$	$\pm\beta^{Mood}$
	(1)	(2)	(3)	(4)	(5)
<i>All Months</i>	1.96*** (9.90)	1.43*** (5.39)	-1.80*** (-9.15)	-1.53*** (-5.59)	0.05*** (7.95)
<i>January</i>	1.69** (2.51)	-0.23 (-0.26)	-2.27*** (-3.21)	-1.76* (-1.84)	0.03 (1.25)
<i>Non-January</i>	1.98*** (9.59)	1.58*** (5.67)	-1.76*** (-8.57)	-1.50*** (-5.30)	0.06*** (7.94)

Panel B: Baker and Wurgler (BW) Portfolios

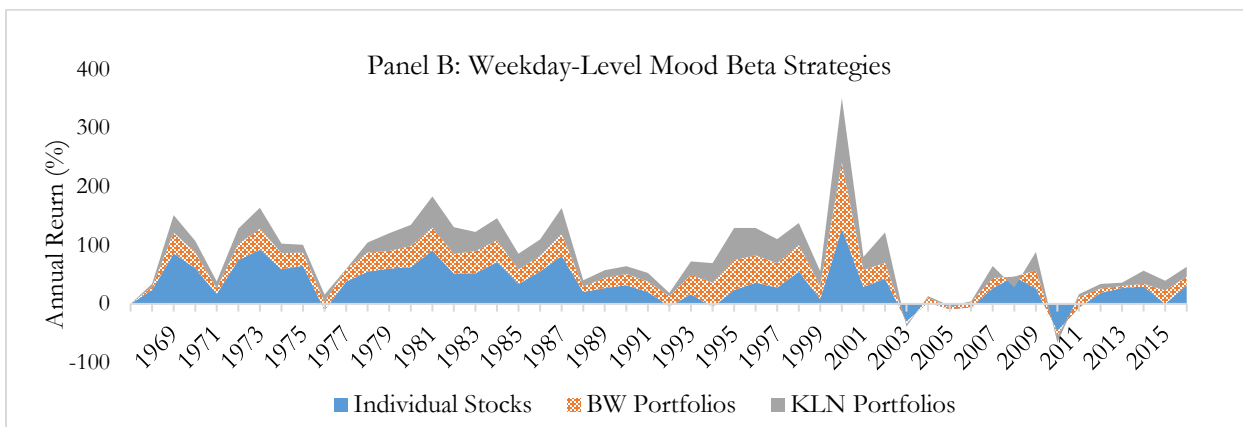
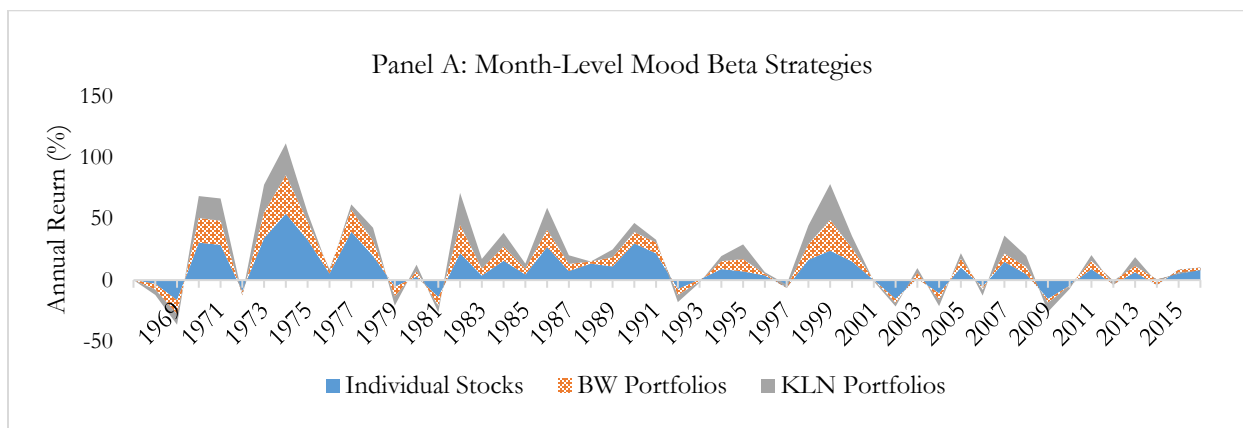
<i>All Months</i>	22.36*** (17.30)	14.30*** (12.93)	-5.80*** (-4.30)	-4.63*** (-4.05)	0.12*** (11.38)
<i>January</i>	28.60*** (6.50)	11.92*** (2.92)	-2.21 (-0.48)	-2.84 (-0.70)	0.04 (1.27)
<i>Non-January</i>	21.80*** (16.14)	14.51*** (12.62)	-6.12*** (-4.37)	-4.78*** (-4.02)	0.13*** (11.50)

Panel C: Keloharju, Linnainmaa, and Nyberg (KLN) Portfolios

<i>All Months</i>	24.63*** (18.37)	14.77*** (13.05)	-1.17 (-0.85)	-1.46 (-1.28)	0.10*** (9.74)
<i>January</i>	30.55*** (6.69)	16.72*** (3.69)	0.19 (0.04)	2.16 (0.50)	0.06* (1.91)
<i>Non-January</i>	24.10*** (17.23)	14.59*** (12.52)	-1.28 (-0.90)	-1.78 (-1.51)	0.11*** (9.61)

Figure A1: Long-Short Mood Beta Strategy Performance over Time

This figure plots the annual returns of three long-short the composite mood beta (β^{Mood}) strategies during the period of 1967-2016. The long-short portfolio is long the top decile of assets with the highest mood beta and short the bottom decile of assets with the lowest mood beta during the high mood periods. The strategy reverses the long and short lags during the low mood period. In Panel A, high mood period refers to January and March and low mood period refers to September and October. In Panel B, high mood period refers to Friday and low mood period refers Monday. The three sets of test assets include the full cross section of individual stocks, the 94 Baker and Wurgler (2006) portfolios (BW portfolios) and the 79 Keloharju et al. (2016) portfolios (KLN portfolios). The strategy is implemented for high and low mood periods only and assumes a zero return during other periods. The compounded annual returns of the long-short portfolios are expressed in percentage points and ignore transaction cost. The composite mood beta is lagged and defined in the Data Appendix. Average annual returns are tabulated for three subsample periods.

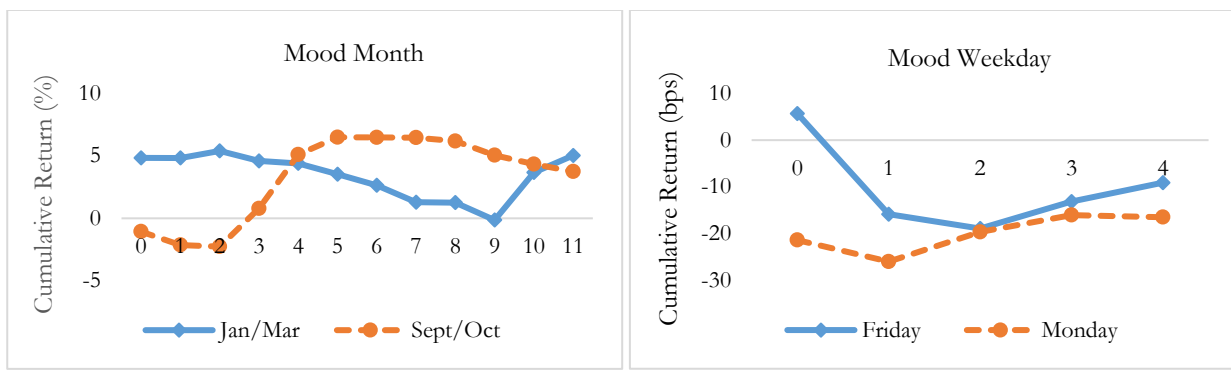


Time Period	Long-Short Annual Return (%)					
	Mood Months			Mood Weekdays		
	Individual Stocks	BW	KLN	Individual Stocks	BW	KLN
1968-1980	17.63	9.53	7.02	52.62	24.90	19.52
1981-2000	9.65	6.98	7.42	41.15	35.53	34.83
2001-2016	0.71	2.33	1.56	11.50	11.30	10.85

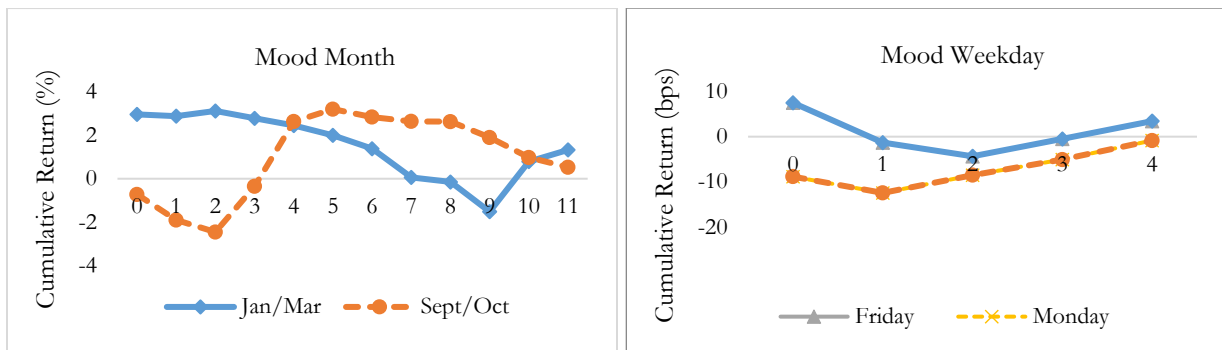
Figure A2: Cumulative Long-Short Mood Beta Returns Following Mood Months

The left three graphs plot the cumulative returns of the long-short the composite mood beta (β^{Mood}) portfolio from the formation month ($t = 0$) to the subsequent eleven months ($t = 1, 2, \dots, 11$). In each graph, we separately plot the cumulative returns for portfolios formed during the positive mood months (January or March) and the negative mood months (September or October). The right three graphs plot the cumulative returns of the long-short the composite mood beta (β^{Mood}) portfolio from the formation weekday ($t = 0$) to the subsequent four weekdays ($t = 1, 2, 3, \text{ and } 4$). We separately plot the cumulative returns for portfolios formed during the positive mood weekday (Friday) and the negative weekday (Monday) during the period of 1968-2016. The three sets of test assets used in Panels A to C. The high-minus-low portfolio is long the top decile of assets with the highest mood beta and short the bottom decile of assets with the lowest mood beta. The composite mood beta is defined in the Data Appendix.

Panel A: Individual Stocks



Panel B: Baker and Wurgler (BW) Portfolios



Panel C: Keloharju, Linnainmaa, and Nyberg (KLN) Portfolios

