Daily Winners and Losers
by Alok Kumar, Stefan Ruenzi, and Michael Ungeheuer

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A! Aalto University
School of Business

In the Media: Wall Street Journal Print Rankings

In the Media: Wall Street Journal Web Rankings

Gainers (Roll over for charts and headlines)   5:02 pm EDT 11/03/16
NYSE | Nasdaq | Arca | Composite

Issue	Price	Chg	% Chg	Volume
Inteliquent (IQNT)	22.58	5.84	34.89	5,639,533
MetaldynePerform (MPG)	19.20	4.90	34.27	4,287,811
TechnicalComms (TCCO)	2.95	0.65	28.26	1,842,305
EnviroStar (EVI)	10.40	1.85	21.64	108,862
EnerNOC (ENOC)	5.80	0.95	19.59	297,150
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In the Media: TV Shows...

Motivation I

Why are daily winners and losers interesting?

- ▶ Most salient easily available info on the cross-section of stocks
- ▶ They receive overproportional attention (Ungeheuer, 2017)

Why is (investor) attention interesting?

- ▶ Attention is a limited resource (Kahneman, 1973)
- ▶ Attention explains economic decision-making and outcomes (Sims, 2011; Bordalo/Gennaioli/Shleifer, 2012)
- ▶ Investor attention explains trading (Barber/Odean, 2008)
- ▶ ...and prices (Da/Engelberg/Gao, 2011)

$\rightarrow$ Are daily winners and losers bought by retail investors? Are they overpriced after the ranking?

Motivation II

Why is investor attention towards daily winners and losers particularly interesting?

- ▶ Many return anomalies where future underperformance is related to past extreme idiosyncratic returns:
  - ▶ idiosyncratic volatility puzzle (Ang/Hodrick/Xing/Zhang, 2006)
  - ▶ maximum daily returns (Bali/Cakici/Whitelaw, 2011)
  - ▶ expected idiosyncratic skewness (Boyer/Mitton/Vorkink, 2010)
  - ▶ death/jackpot probability (Campbell/Hilscher/Szilagyi, 2008; Conrad/Kapadia/Xing, 2014)
  - ▶ . . .

$\rightarrow$ Can the attention-induced overpricing of daily winners and losers explain these return anomalies?

**How are daily winners and losers
traded and priced?**

Data & Methodology

US common stocks with $p_{t-1} \geq \$5$ from NYSE, AMEX, NASDAQ from July 1963 to December 2015:

- ▶ Daily and monthly stock returns: CRSP
- ▶ Discount brokerage retail trading data (Barber/Odean 2008)
- ▶ Institutional trading data (ANcerno)
- ▶ Other: Institutional ownership (13f), Compustat, TAQ, Factor Returns...

Defining daily winners and losers:

(1) Each day: Top (bottom) 80 stocks are day's winners (losers)

(2) End of each month, form 4 portfolios:

Never	Neither daily winner nor loser that month
Loser	Loser (but not winner) at least once that month
Winner	Winner (bot not loser) at least once that month
Both	Winner *and* loser at least once each that month

The Pricing of Daily Winners and Losers

Portfolio sorts:

Portfolio	Value-Weighted	Equal-Weighted	% of Stocks	% of Mkt.Cap.
Never	0.53%	0.82%	77.88%	93.14%
Loser	-0.17%	0.38%	6.54%	2.62%
Winner	0.39%	0.20%	8.90%	3.11%
Both	-1.07%	-0.90%	6.67%	1.13%
Never-Loser	0.70%***	0.44%***		
(NML)	(3.74)	(3.30)		
Never-Winner	0.14%	0.62%***		
(NMW)	(0.85)	(5.15)		
Never-Both	1.60%***	1.72%***		
(NMB)	(5.46)	(9.08)		
Sharpe-Ratio	0.77	1.32		
T (Months)	630	630		

$\rightarrow$ Daily winners and losers underperform after being ranked.

$\rightarrow$ Consistent with overpricing due to attention-induced retail buying pressure after ranking.

The Pricing of Daily Winners and Losers
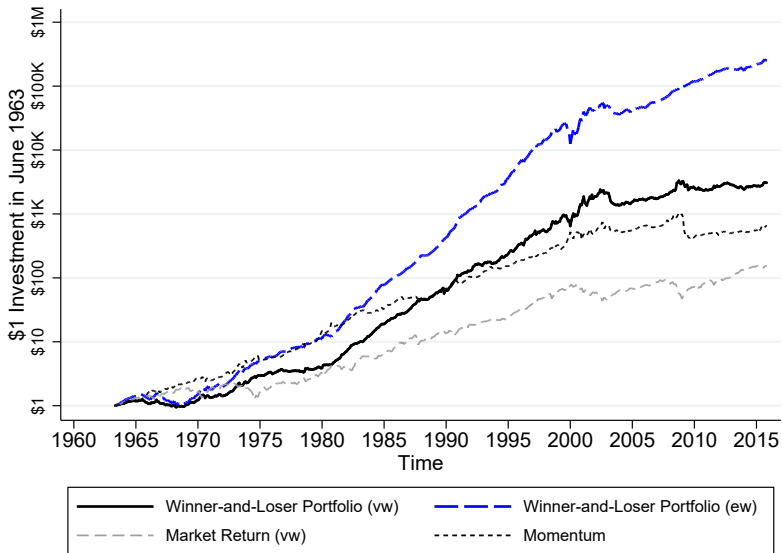
The Pricing of Daily Winners and Losers

Effect is robust:

- ▶ Survives factor models, including Fama/French's (2015) 5-factor model and Hou et al.'s (2015) Q-Model
- ▶ Highly significant in Fama/MacBeth (t-stats beyond -10)
- ▶ Robust to using $1 price filter, excluding NASDAQ stocks, excluding small firms, industry- or DGTW-adjusting returns
- ▶ Significant with 1-month gap between ranking- and holding-month
- ▶ Significant at variations of winner/loser-threshold around 80

The Pricing of Daily Winners and Losers

Alternative return-conventions in Fama/MacBeth regressions:

	(1) C2C only	(2) O2O only	(3) C2C & O2O	(4) O2C only	(5) C2C & O2C
$I_{Any,C2C}$	-0.0060***		-0.0055***		-0.0053***
	(-5.75)		(-6.54)		(-6.13)
$I_{Any,Alt}$		-0.0038***	-0.0008	-0.0039***	-0.0010
		(-3.52)	(-0.89)	(-3.53)	(-0.95)

(1963-2015, controls: Beta, size, value, momentum, short- and long-term reversal)

$\rightarrow$ Only commonly observed close-to-close rankings matter.
$\rightarrow$ Rankings based on other return periods do not.

The Pricing of Daily Winners and Losers

Alternative return-conventions in Fama/MacBeth regressions:

	(1) C2C only	(6) C2O only	(7) C2C & C2O	(8) 2D only	(9) C2C & 2D
$I_{Any,C2C}$	-0.0060***		-0.0059***		-0.0053***
	(-5.75)		(-5.76)		(-6.06)
$I_{Any,Alt}$		-0.0023***	-0.0002	-0.0045***	-0.0009
		(-2.93)	(-0.32)	(-3.76)	(-0.81)

(1963-2015, controls: Beta, size, value, momentum, short- and long-term reversal)

$\rightarrow$ Only commonly observed close-to-close rankings matter.
$\rightarrow$ Rankings based on other return periods do not.

Rankings and the Idiosyncratic Volatility Puzzle

Sorting by Idiosyncratic Volatility (7/1963-12/2015):

Portfolio	Low	2	3	4	High	High-Low
all stocks	0.73%	0.90%	0.95%	0.80%	0.07%	-0.66%***
						(-3.02)
only Never	0.70%	0.83%	0.96%	0.92%	0.67%	-0.03%
						(-0.18)

$\rightarrow$ The idiosyncratic volatility puzzle disappears when daily winners and losers (22% of stocks, 7% of market cap.) are excluded.
$\rightarrow$ Holds for equal- and value-weighted portfolio returns...
$\rightarrow$ as well as the max-return puzzle (Bali et al., 2011), the expected idiosyncratic skewness effect (Boyer et al., 2010), and death probability (Campbell et al., 2008).

Rankings and the Idiosyncratic Volatility Puzzle

	NMB	NMB	IVol	IVol
Rm-Rf	-0.3029***	0.0062	0.3778***	0.2892***
	(-4.82)	(0.13)	(8.35)	(6.99)
SMB	-1.1257***	-0.2027	1.1284***	0.7990***
	(-12.42)	(-1.39)	(17.45)	(12.01)
HML	0.4557***	0.0050	-0.5509***	-0.4176***
	(3.75)	(0.05)	(-6.26)	(-6.25)
MOM	0.1416*	0.0073	-0.1642**	-0.1228**
	(1.72)	(0.11)	(-2.50)	(-2.24)
Idio.Vola.		-0.8180***		
		(-8.76)		
NMB				-0.2925***
				(-6.94)
Alpha	1.75%***	1.18%***	-0.70%***	-0.18%
	(7.20)	(5.43)	(-4.57)	(-1.22)

$\rightarrow$ Returns to high idiosyncratic volatility stocks do not explain the pricing of daily winners and losers.

$\rightarrow$ Returns to daily winners and losers can explain the pricing of high idiosyncratic volatility stocks.

Rankings and the Idiosyncratic Volatility Puzzle

Hou/Loh (2016) decomposition of the idiosyncratic volatility puzzle's Fama/MacBeth-coefficient:

	Explained		Unexplained		Total	
I_{Any}	-0.1134	64.61%*** (14.63)	-0.0621	35.39%*** (8.01)	-0.1755	100.00%

$\rightarrow$ One simple ranking dummy explains over 60% of the puzzle.
$\rightarrow$ Next best candidates from Hou/Loh (2016):

- Lagged monthly returns at 34%
- Bid/ask spreads at 30%
- Retail trading proportion at 22%

Rankings and the Idiosyncratic Volatility Puzzle

Hou/Loh (2016) decomposition with a refined ranking salience measure, taking into account **how often** and **how far up** a stock was ranked:

	Explained		Unexplained		Total	
RankingSalience	-0.1685	96.02%***	-0.0070	3.98%	-0.1755	100.00%
		(9.22)		(0.38)		
LoserSalience	-0.0409	23.32%***	0.0052	-2.94%	-0.1755	100.00%
		(7.79)		(-0.25)		
WinnerSalience	-0.1397	79.62%***				
		(7.29)				

$\rightarrow$ Refined ranking salience measure **explains the entire puzzle**.
$\rightarrow$ Most of the explanatory power comes from the salient winners.

The Trading of Daily Winners and Losers

	Daily Predictive		Monthly Contemporaneous Short Interest
	BS_{Ret}	BS_{Ins}	
I_{WL}			0.0020***
			(12.39)
I_L	0.0411***	-0.0071**	0.0012***
	(6.22)	(-2.10)	(11.20)
I_W	0.1265***	-0.0333***	-0.0002**
	(16.64)	(-9.80)	(-2.49)
Firm & Time FEs	Yes	Yes	Yes
Lagged Dependent Variable	Yes	Yes	Yes
Years	2/1991-	2/1997-	2/2003-
	1/1997	1/2011	12/2015

(Controls: Beta, size, value, momentum, short- and long-term reversal, abs. returns)

Daily winners and losers are...

- ▶ bought by retail investors.
- ▶ sold by institutional investors and short-sellers.

$\rightarrow$ Consistent with insufficient liquidity-provision to attention-induced buying of daily winners and losers by retail investors.

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Variation Across Firms and Over Time

The underperformance of daily winners and losers is stronger...

- ▶ for stocks with high short-sale constraints
- ▶ when sentiment is high
- ▶ when daily winner and loser returns are particularly salient

The underperformance of daily winners and losers is unaffected...

- ▶ by firm size
- ▶ by illiquidity, measured by Amihud's (2002) price impact proxy and Corwin/Schultz's (2012) spread proxy

Conclusion

Robust evidence that daily winners and losers

- ▶ are overpriced after rankings
- ▶ due to buying-pressure by retail investors
- ▶ combined with insufficient liquidity provision by institutional investors and short-sellers

Idio. Vola. Puzzle driven by daily winners and losers:

- ▶ Puzzle disappears for unranked stocks (93% of mkt.cap.).
- ▶ Daily winner and loser factor return fully explains puzzle.
- ▶ Hou/Loh (2016) decomposition supports daily winner loser status as best known explanation of puzzle.

Implications?

- ▶ Strategic timing of SEOs, M&As, insider sales...
- ▶ Price manipulation?

Thank you!

Kumar, A./Ruenzi, S./Ungeheuer, M. (2018):
Daily Winners and Losers,
Working Paper, University of Mannheim.

New York Times Print Ranking

Stock (TICKER)	Close	Chg	% Chg	Volume (100)
20 TOP GAINERS				
Virgin America (VA)	55.11	+16.21	+41.7	156951
Ruckus Wirel (RKUS)	13.24	+3.24	+32.4	376342
USMD Holding (USMD)	12.16	+1.81	+17.5	136
Unico Americ (UNAM)	11.00	+1.61	+17.2	221
Edwards Lifesc (EW)	105.08	+15.16	+16.9	90782
Flexion (FLXN)	10.95	+1.53	+16.2	5822
Sorrento (SRNE)	6.30	+0.85	+15.6	5759
Genocea (GNCA)	6.83	+0.88	+14.8	48553
MediciNova I (MNOV)	9.00	+1.10	+13.9	8255
NantKwest (NK)	9.72	+1.09	+12.6	6110
GBT (GBT)	18.14	+2.01	+12.5	5310
Nuvectra (NVTR)	6.96	+0.75	+12.1	4707
AGTC (AGTC)	16.24	+1.69	+11.6	1878
Aqua Metals (AQMS)	7.93	+0.78	+10.9	1942
Esperion The (ESPR)	19.36	+1.86	+10.6	7674
Odyssey Mari (OMEX)	9.05	+0.81	+9.8	1598
AveXis (AVXS)	28.17	+2.41	+9.4	938
Eiger (EIGR)	20.00	+1.68	+9.2	215
Swestn Energy (SWN)	8.51	+0.70	+9.0	234006
Stratasy (SSYS)	27.65	+2.25	+8.9	19743
20 TOP LOSERS				
IRadimed (IRMD)	15.51	−3.85	−19.9	4629
Natus Medica (BABY)	31.84	−7.80	−19.7	27199
Smith & Wess (SWHC)	22.78	−4.98	−17.9	142074
ConforMIS (CFMS)	10.28	−1.71	−14.3	9896
Brocade Comm (BRCD)	9.19	−1.45	−13.6	339469
Clovis Oncol (CLVS)	17.26	−2.11	−10.9	26528
Sturm Ruger & (RGR)	65.24	−6.38	−8.9	11520
TerraForm Po (TERP)	9.07	−0.76	−7.7	52502
Blue Buffalo (BUFF)	23.64	−1.93	−7.5	17595
Alamos Gold (AGI)	5.20	−0.41	−7.3	17909
Allegheny Tec (ATI)	15.19	−1.19	−7.3	25508
Nv5 Global (NVEE)	25.64	−1.98	−7.2	904
Valeant (VRX)	26.11	−1.99	−7.1	259345
LivaNova (LIVN)	49.62	−3.74	−7.0	10279
AmTrust Fin (AFSI)	24.91	−1.84	−6.9	35270
Vista Outdoo (VSTO)	49.16	−3.53	−6.7	5744
Titan Intl (TWI)	5.04	−0.36	−6.7	3137
PulteGroup (PHM)	17.21	−1.21	−6.6	224934
Amaya INC (AYA)	12.90	−0.88	−6.4	1628
BorgWarner (BWA)	35.28	−2.40	−6.4	35434

New York Times Web Ranking

Stock Spotlight 11/03/2016

MOST ACTIVE	TOP GAINERS	TOP LOSERS

Stock	Latest	% change
Inteliquent Inc	22.58	+34.89%
Metaldyne Performance Group Inc	19.20	+34.27%
Technical Communications Corp	2.95	+28.26%
Envirostar Inc	10.40	+21.64%
EnerNOC Inc	5.80	+19.59%
DryShips Inc	4.70	+19.29%
Lattice Semiconductor Corp	7.55	+18.52%
Cross Country Healthcare Inc	13.57	+17.08%

Data delayed at least 15 minutes

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Yahoo Finance Ranking

Stocks: Gainers >

Symbol	Last Price	Change	% Change
IQNT	22,60	5,86	35,01 %
Inteliquent, Inc.			
MPG	19,20	4,90	34,27 %
Metaldyne Performance Group Inc			
TCCO	2,95	0,65	28,26 %
Technical Communications Corpor			
ZBIO	32,82	2,67	8,86 %
ProShares UltraPro Short NASDAQ			
EVI	10,40	1,85	21,64 %
EnviroStar, Inc. Common Stock			

New York Times Print Ranking in 1973

TUESDAY, OCTOBER 9, 1973

Percentage Gains

Stocks with the largest percentage gains on the New York Stock Exchange yesterday:

| Stock	Last Price	Net Chng.	Pct. Chang.
Suave Shoe	3⅞	+ ⅝	+19.2
NorCenRy	6½	+	+18.2
vjReadg Co	1¾	+ 4	+16.7
Bausch Lb	44	+ 5⅞	+15.4
Union Corp	9⅛	+ 1⅛	+14.1

Percentage Drops

Stocks with the largest percentage drops on the New York Stock Exchange yesterday:

Stock	Last Price	Net Chng.	Pct. Chang.
Elixir Ind	4	— ¾	—15.8
Texaco Inc	32⅝	— 2⅝	— 7.4
APL Cp pfB	8⅜	— ⅝	— 6.9
Divers Ind	1⅞	— ⅛	— 6.3
EMI Ltd	3¾	— ¼	— 6.3

Daily Return Sort: Attention
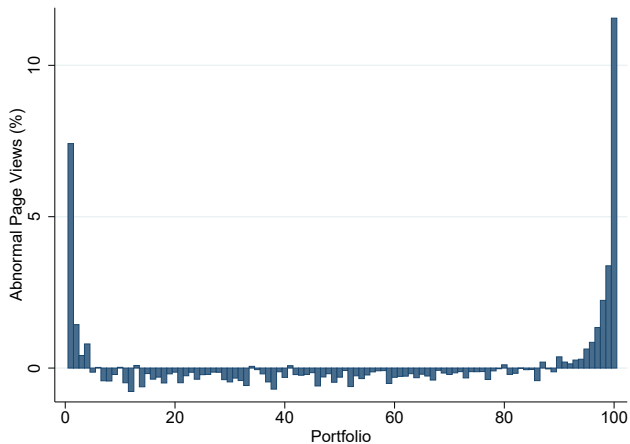
$\rightarrow$ Daily winner and loser attention spike
$\rightarrow$ Flat relation between 10th and 90th percentile

Daily Return Sort: Absolute Returns
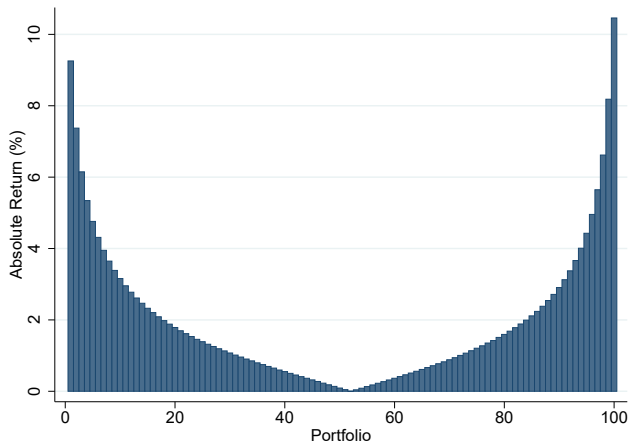
$\rightarrow$ Attention $\not\propto$ Absolute Returns

$\rightarrow$ Relation not even strictly positive as returns become more extreme

CRSP-Ranks of WSJ Gainers & Decliners: Losers
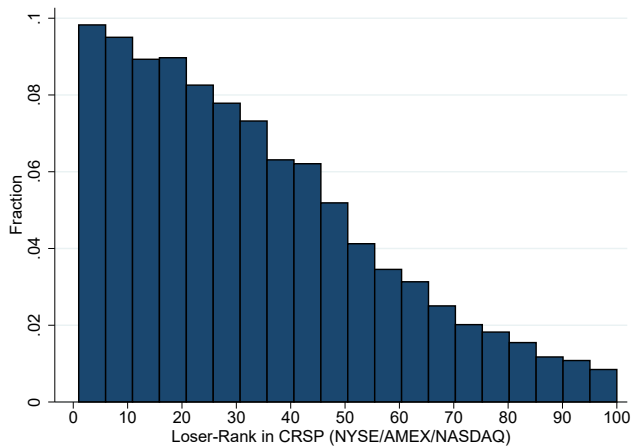
CRSP-Ranks of WSJ Gainers & Decliners: Winners
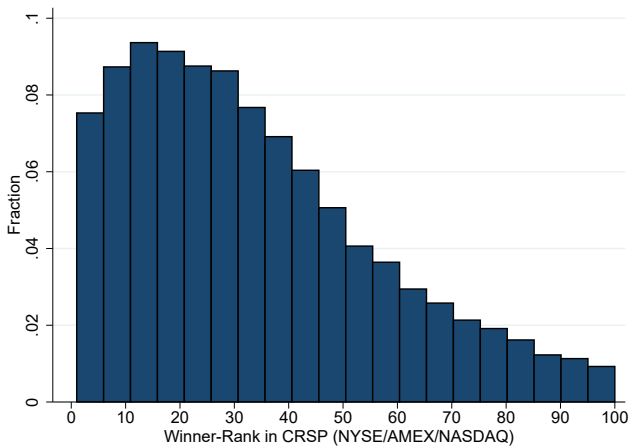
Not Explained by Factor Models I

	Value-Weighted Never-Both	Equal-Weighted Never-Both
1F	1.92%***	1.90%***
	(7.31)	(10.55)
3F	1.88%***	1.80%***
	(8.80)	(12.86)
4F	1.75%***	1.76%***
	(7.20)	(11.71)
4F + ST + LT	1.79%***	1.74%***
	(6.80)	(10.27)
4F + UMO	1.73%***	1.74%***
	(5.29)	(9.75)
4F + BAB	1.61%***	1.60%***
	(5.93)	(10.44)
4F + QMJ	1.00%***	1.20%***
	(4.38)	(9.33)

(1963-2015 if available, Newey-West SEs with 4 lags)

Not Explained by Factor Models II

	Value-Weighted Never-Both	Equal-Weighted Never-Both
4F + Kelly	2.12%***	2.00%***
	(6.97)	(10.89)
4F + CRW	1.91%***	1.90%***
	(7.50)	(12.15)
4F + PS	1.86%***	1.85%***
	(6.84)	(11.04)
4F + Sadka	2.25%***	2.11%***
	(6.04)	(9.20)
4F + PMU	1.38%***	1.51%***
	(4.96)	(8.85)
4F + SY	1.17%***	1.43%***
	(4.58)	(9.92)
FF-5F	1.45%***	1.45%***
	(6.73)	(11.66)
Q-Model	1.70%***	1.57%***
	(5.72)	(8.36)

(1963-2015 if available, Newey-West SEs with 4 lags)

Not Explained by Firm Characteristics

|	(1)	(2)	(3)	(4)	(5)
I_{WL}	-0.0156***	-0.0165***	-0.0147***	-0.0165***	-0.0164***
	(-12.48)	(-12.71)	(-10.86)	(-12.67)	(-13.03)
I_L		-0.0076***	-0.0074***	-0.0074***	-0.0080***
		(-10.03)	(-9.23)	(-9.71)	(-10.58)
I_W		-0.0028***	-0.0023***	-0.0027***	-0.0026***
		(-4.04)	(-3.57)	(-3.94)	(-4.14)
Beta	0.0001	0.0004	0.0004	0.0010	-0.0002
	(0.06)	(0.28)	(0.35)	(0.85)	(-0.14)
ln(Size)	-0.0006*	-0.0008**	-0.0010***	-0.0008**	-0.0002
	(-1.86)	(-2.39)	(-3.08)	(-2.49)	(-0.51)
ln(B/M)	0.0025***	0.0024***	0.0023***	0.0023***	0.0032***
	(4.34)	(4.20)	(3.84)	(4.28)	(7.19)
$Ret_{t-12,t-2}$	0.0127***	0.0126***	0.0123***	0.0130***	0.0114***
	(9.29)	(9.25)	(9.08)	(9.46)	(9.35)
$Ret_{t-1,t-1}$	-0.0417***	-0.0432***	-0.0429***	-0.0446***	-0.0543***
	(-11.19)	(-11.39)	(-11.12)	(-11.77)	(-15.11)
$Ret_{t-36,t-13}$	-0.0004	-0.0005	-0.0007	-0.0006	-0.0001
	(-0.76)	(-0.86)	(-1.21)	(-1.02)	(-0.31)
Op.Profitability			0.0100***		
			(5.57)		
Asset Growth			-0.0074***		
			(-7.43)		
ln(Turnover)				-0.0010**	
				(-2.49)	
Δln(Turnover)				0.0011***	
				(3.34)	
FF48-FEs	No	No	No	No	Yes
Size-Decile-FEs	No	No	No	No	Yes
Exchange-FEs	No	No	No	No	Yes

(1963-2015, Fama-MacBeth regressions, Newey-West SEs with 1 lag)

Performance of NMB Over Three Years

Cumulative Carhart (1997) alphas in months after ranking:
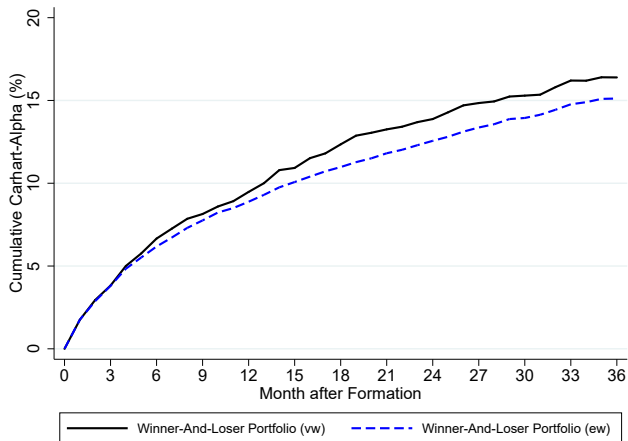
Alternative Ranking Salience Measure

Equal-Weighted Independent Sort:

Winner-Salience	Loser-Salience				T3-Never	t-stat
	Never	T1	T2	T3		
Never	0.82%	0.59%	0.37%	0.18%	-0.64%	(-3.70)
T1	0.34%	-0.33%	-0.27%	-0.56%	-0.90%	(-2.95)
T2	0.12%	-0.01%	-0.35%	-0.74%	-0.86%	(-3.13)
T3	0.04%	-1.13%	-1.26%	-1.97%	-2.02%	(-7.85)
T3-Never	-0.78%	-1.71%	-1.63%	-2.15%		
t-stat	(-4.53)	(-5.95)	(-6.00)	(-7.89)		
T3/T3-Never	-2.79%					
t-stat	(-9.65)					
Sharpe-Ratio	1.38					

$\rightarrow$ Loser and Winner Salience matter by themselves.
$\rightarrow$ ...and they positively interact.

Alternative Ranking Salience Measure

Value-Weighted Independent Sort:

	Loser-Salience					
Winner-Salience	Never	T1	T2	T3	T3-Never	t-stat
Never	0.53%	0.29%	-0.34%	-0.43%	-0.96%	(-3.91)
T1	0.46%	-0.98%	-0.45%	-0.99%	-1.45%	(-3.35)
T2	0.19%	-0.26%	-0.45%	-1.38%	-1.57%	(-3.62)
T3	0.15%	-1.13%	-1.03%	-2.15%	-2.30%	(-5.51)
T3-Never	-0.38%	-1.41%	-0.69%	-1.72%		
t-stat	(-1.64)	(-3.63)	(-1.70)	(-4.18)		
T3/T3-Never	-2.68%					
t-stat	(-9.65)					
Sharpe-Ratio	0.87					

$\rightarrow$ Loser and Winner Salience matter by themselves.
$\rightarrow$ ...and they positively interact.

Alternative Ranking Salience Measure

Fraction of Stocks in each Portfolio:

	Loser-Salience			
Winner-Salience	Never	T1	T2	T3
Never	77.99%	2.54%	2.27%	1.63%
T1	3.52%	0.57%	0.58%	0.50%
T2	3.15%	0.62%	0.70%	0.71%
T3	2.29%	0.59%	0.81%	1.53%

Fraction of Market-Cap in each Portfolio:

	Loser-Salience			
Winner-Salience	Never	T1	T2	T3
Never	93.19%	1.14%	0.94%	0.50%
T1	1.52%	0.15%	0.13%	0.09%
T2	1.04%	0.14%	0.13%	0.11%
T3	0.57%	0.09%	0.11%	0.16%

Overnight vs. Intraday Holding Month Returns

Based on 1993-2015 CRSP open prices and
stocks with Size$\geq$NYSE's 1st size quintile
as in Lou, Polk, and Skouras (2017):

	Full	Overnight	Intraday
I_{WL}	-0.0087*	0.0257***	-0.0296***
	(-1.88)	(7.75)	(-7.10)
I_L	-0.0089***	0.0132***	-0.0197***
	(-4.82)	(9.21)	(-9.60)
I_W	0.0012	0.0119***	-0.0086***
	(0.71)	(8.76)	(-5.40)

(Controls: Beta, size, value, momentum, short- and long-term reversal)
(1963-2015, Fama-MacBeth regressions, Newey-West SEs with 1 lag)

Consistent with...

$\rightarrow$ intraday reversal driven by insitutional trading
$\rightarrow$ overnight trading in the opposite direction by retail investors

Variation Across Firms

Never-Both returns in sample splits:

Split by...	Low	High	High-Low
Retail Ownership	1.70%***	2.53%***	0.83%***
			(3.26)
Firm Size	1.90%***	1.50%***	-0.39%
			(-1.30)
Amihud-Illiquidity	1.87%***	1.87%***	-0.00%
			(-0.01)
Corwin/Schultz-Spread	1.19%***	1.76%***	0.58%*
			(1.66)

$\rightarrow$ Short sale constraints matter, consistent with overpricing of daily winners and losers.
$\rightarrow$ Weak effect of illiquidity on underperformance of daily winners and losers.

Variation Over Time

	Saliency of Winners and Losers		Baker/Wurgler Sentiment
Rm-Rf	-0.2987***	-0.2968***	-0.3006***
	(-4.81)	(-4.75)	(-4.71)
SMB	-1.1400***	-1.1465***	-1.1056***
	(-12.99)	(-13.04)	(-12.05)
HML	0.4661***	0.4604***	0.4493***
	(3.97)	(3.90)	(3.74)
MOM	0.1650**	0.1649**	0.1433*
	(2.00)	(1.99)	(1.77)
Avg.Vola. (std)	0.0094***	0.0101***	
	(3.02)	(3.26)	
Avg.Kurt. (std)		0.0035**	
		(2.29)	
BW-Sentiment (std)			0.0079***
			(3.22)
Alpha	1.73%***	1.74%***	1.80%***
	(7.31)	(7.35)	(7.09)

The underperformance of daily winners and losers is stronger when
→ daily winner and loser returns are salient
→ ...and when sentiment is high.

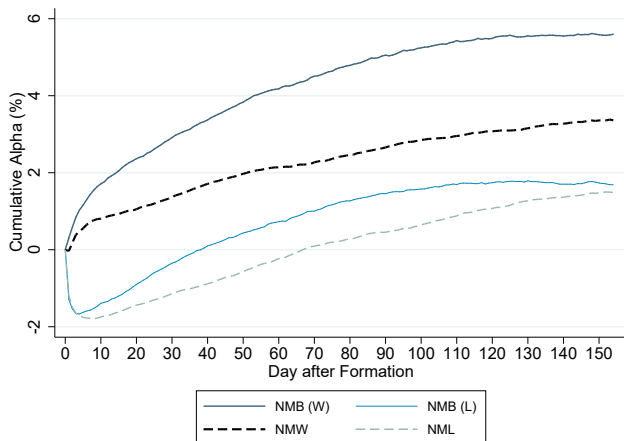# Shorting Winners and Losers Separately

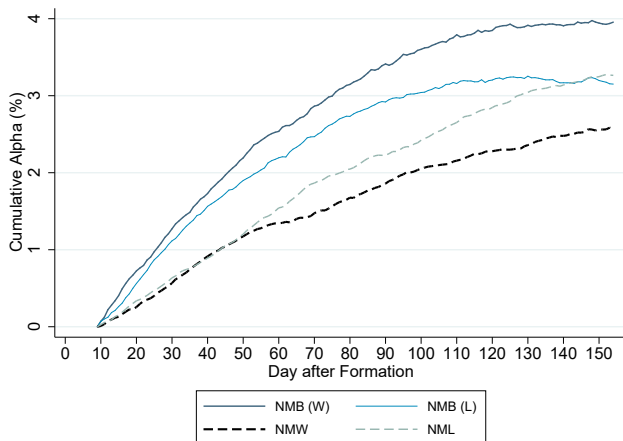...starting on the ranking day:
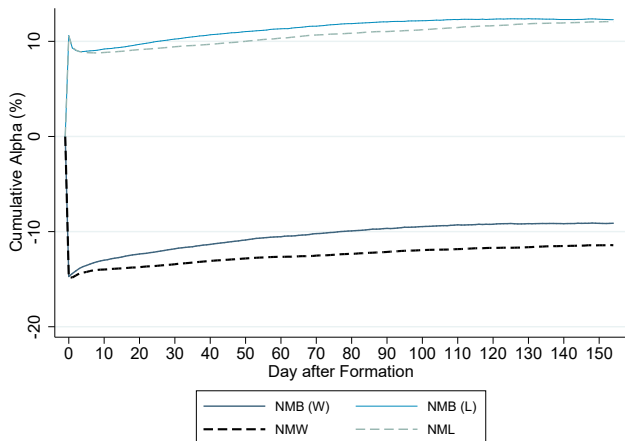
Shorting Winners and Losers Separately
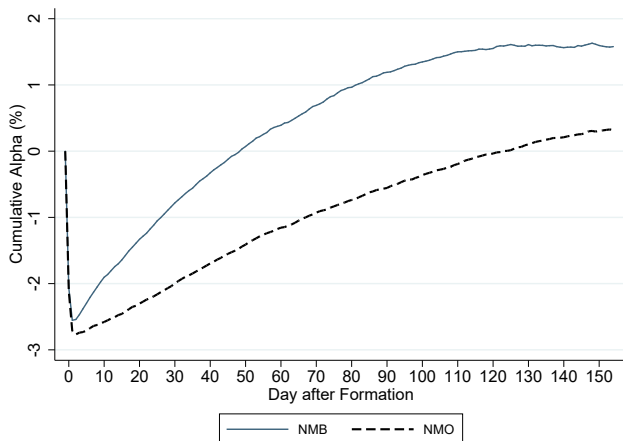
...starting 1 day after the ranking day:

Shorting Winners and Losers Separately

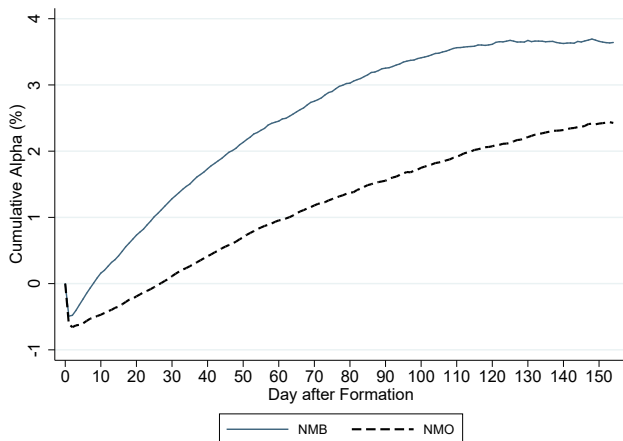...starting 10 days after the ranking day:

Shorting Winners and Losers Jointly

...starting on the ranking day:

Shorting Winners and Losers Jointly

...starting 1 day after the ranking day:

Shorting Winners and Losers Jointly

...starting 10 days after the ranking day: