Growth or Glamour? Fundamentals and Systematic Risk in Stock Returns Appendix

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Table 1: The sensitivity of market profitability to nominal interest rates

The table reports the OLS regression coefficients, Newey-West t-statistics, and adjusted R^2 for regressions $\sum_{k=1}^{K}[\rho^{k-1} roe_{M,t,t+k}] = \alpha + \beta \sum_{k=1}^{K} \rho^{k-1} \log(1 + r_{f,t+k}) + \varepsilon_{i,t,t+k}$. $roe_{M,t,t+k}$ is $\log(1 + ROE_{M,t,t+k})$, where $ROE_{M,t,t+k}$ is the year $t+k$ clean-surplus return on book equity for the market portfolio and r_f is the Treasury-Bill return.

1929-2000:

	K=1		K=2		K=3		K=4		K=5	
	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2
1929-2000	.41	6%	.41	6%	.41	7%	.40	7%	.39	8%
	(2.9)		(3.0)		(3.0)		(3.0)		(3.0)	
1929-1962	.22	-3%	-.13	-3%	-.10	-3%	-.19	-3%	.49	-2%
	(.25)		(-.14)		(-.09)		(-.21)		(.69)	
1963-2000	.40	11%	.39	15%	.41	19%	.42	22%	.44	25%
	(2.9)		(3.2)		(3.54)		(3.7)		(3.8)	

Table 2: Alternative specifications for ROE regressions

The table reports the OLS regression coefficients, Newey-West t-statistics, and adjusted R^2 for the regression shown in each panel. The dependent variable is $\sum_{k=2}^{K}[\rho^{k-1}(roe_{1,t,t+k} - roe_{5,t,t+k})]$, where $i = 1$ denotes the extreme growth and $i = 5$ the extreme value portfolio. The market's N_{DR} and N_{CF} are extracted using the annual VAR described in Campbell, Polk, and Vuolteenaho (2008). $\Delta_{t+k}\ln(P/E)$ is the change in log smoothed price-earnings ratio from $t+k-1$ to $t+k$. $\widehat{roe}_{i,t,t+k}$ is $[roe_{i,t,t+k} - .4 * \log(1 + r_{f,t+k})]$ where $roe_{i,t,t+k}$ is $\log(1 + ROE_{i,t,t+k})$, with $ROE_{i,t,t+k}$ the year $t+k$ clean-surplus return on book equity (for portfolio i sorted at t) and $r_{f,t+k}$ the Treasury-bill return.

$I: \quad \alpha + \gamma(\widehat{roe}_{1,t,t} - \widehat{roe}_{5,t,t}) + \beta_{DR}\sum_{k=2}^{K}[\rho^{k-1}\mathbf{\Delta}_{t+k}\ln(\mathbf{P}/\mathbf{E})] + \beta_{CF}\sum_{k=2}^{K}[\rho^{k-1}\widehat{roe}_{M,t+k}] + \varepsilon$

	K=2			K=3			K=4			K=5		
	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2
1929-2000	.01	-.22	8%	.07	-.27	16%	.09	-.27	22%	.09	-.27	21%
	(1.0)	(-4.4)		(4.0)	(-5.2)		(3.1)	(-3.9)		(2.3)	(-2.9)	
1929-1962	.01	-.20	29%	.04	-.24	34%	.06	-.26	32%	.05	-.26	30%
	(0.6)	(-4.0)		(1.9)	(-3.6)		(1.3)	(-3.1)		(.9)	(-2.7)	
1963-2000	.00	-.48	4%	.10	-.47	10%	.15	-.27	14%	.15	-.13	16%
	(.0)	(-2.1)		(2.3)	(-2.1)		(3.4)	(-1.1)		(2.4)	(-.39)	

$II: \quad \alpha + \beta_{DR}\sum_{k=2}^{K}[\rho^{k-1}\mathbf{\Delta}_{t+k}\ln(\mathbf{P}/\mathbf{E})] + \beta_{CF}\sum_{k=2}^{K}[\rho^{k-1}\widehat{roe}_{M,t+k}] + \varepsilon$

	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2
1929-2000	.01	-.21	9%	.07	-.27	17%	.09	-.27	23%	.09	-.27	22%
	(.9)	(-4.2)		(4.0)	(-5.2)		(3.1)	(-3.8)		(2.4)	(-2.8)	
1929-1962	.01	-.20	31%	.04	-.24	35%	.06	-.26	32%	.06	-.26	29%
	(.6)	(-4.1)		(1.9)	(-3.5)		(1.4)	(-3.0)		(1.0)	(-2.6)	
1963-2000	.01	-.40	0%	.11	-.39	9%	.16	-.23	15%	.16	-.08	16%
	(.2)	(-1.9)		(2.5)	(-1.6)		(3.4)	(-.9)		(2.5)	(-.2)	

$III: \quad \alpha + \gamma(\widehat{roe}_{1,t,t} - \widehat{roe}_{5,t,t}) + \beta_{DR}\sum_{k=2}^{K}[\rho^{k-1}(-N_{DR,t+k})] + \beta_{CF}\sum_{k=2}^{K}[\rho^{k-1}N_{CF,t+k}] + \varepsilon$

	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2
1929-2000	.05	-.11	6%	.11	-.15	19%	.12	-.13	21%	.12	-.11	20%
	(2.2)	(-2.3)		(3.6)	(-2.6)		(3.4)	(-1.7)		(3.1)	(-1.3)	
1929-1962	.01	-.13	11%	.05	-.16	14%	.04	-.18	14%	.01	-.20	14%
	(.7)	(-2.9)		(1.2)	(-2.1)		(.6)	(-2.2)		(.1)	(-2.5)	
1963-2000	.09	.14	11%	.15	-.02	24%	.16	-.05	32%	.17	-.05	44%
	(2.5)	(.8)		(3.8)	(.1)		(5.1)	(-.3)		(8.9)	(-.4)	

$IV: \quad \alpha + \beta_{DR}\sum_{k=2}^{K}[\rho^{k-1}(-N_{DR,t+k})] + \beta_{CF}\sum_{k=2}^{K}[\rho^{k-1}N_{CF,t+k}] + \varepsilon$

	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2	β_{DR}	β_{CF}	R^2
1929-2000	.05	-.11	7%	.11	-.14	20%	.12	-.11	20%	.12	-.10	20%
	(2.2)	(-2.4)		(3.5)	(-2.5)		(3.3)	(-1.5)		(3.1)	(-1.2)	
1929-1962	.01	-.13	13%	.05	-.15	14%	.04	-.15	10%	.01	-.18	11%
	(.7)	(-2.9)		(1.2)	(-2.0)		(.06)	(-1.8)		(.2)	(-2.2)	
1963-2000	.10	.07	9%	.16	-.00	26%	.16	-.06	34%	.17	-.07	45%
	(2.5)	(.5)		(3.7)	(-.0)		(5.6)	(-.4)		(9.2)	(-.6)	

Table 3: "Bad" cash-flow and "good" discount-rate betas of value and growth stocks
The table reports the "bad" cash-flow betas (top panel) and "good" discount-rate betas (bottom panel) of quintile portfolios formed each year by sorting firms on year-t BE/ME. We allocate 20% of the market's value to each of the five value-weight portfolios. The portfolio $i = 1$ is the extreme growth portfolio (low BE/ME) and $i = 5$ the extreme value portfolio (high BE/ME). "1-5" denotes the difference between extreme growth and value portfolios. BE/ME used in sorts is computed as year $t-1$ BE divided by May-year-t ME. Throughout the table, the market's N_{DR} and N_{CF} are the factors extracted using the full-period estimates of the VAR of Table 2 in the paper. The bad cash-flow beta is then measured as $\beta_{i,CFM} = \frac{\mathrm{Cov}\left(r_{i,t+1}, N_{M,CF,t+1}\right)}{\mathrm{Var}\left(r_{M,t+1}\right)}$ and the good discount-rate beta as $\beta_{i,DRM} = \frac{\mathrm{Cov}\left(r_{i,t+1}, -N_{M,DR,t+1}\right)}{\mathrm{Var}\left(r_{M,t+1}\right)}$. The t-statistics (in parentheses) do not account for the estimation uncertainty in extraction of the market's news terms.

$\beta_{i,CFM}$ (Bad beta): Growth and value returns on the market's N_{cf}

	Growth	2	3	4	Value	G-V
1929-2000	**0.07**	**0.11**	**0.13**	**0.16**	**0.20**	**-0.13**
	(1.6)	(2.4)	(3.0)	(3.8)	(3.5)	(-3.5)
1929-1962	**0.16**	**0.18**	**0.20**	**0.22**	**0.27**	**-0.11**
	(3.2)	(2.8)	(3.2)	(3.6)	(3.2)	(-2.1)
1963-2000	**-0.15**	**-0.08**	**-0.05**	**-0.00**	**-0.01**	**-0.14**
	(-2.2)	(-1.3)	(-0.9)	(-0.0)	(-0.1)	(-2.6)

$\beta_{i,DRM}$ (Good beta): Growth and value returns on the market's $-N_{dr}$

	Growth	2	3	4	Value	G-V
1929-2000	**0.86**	**0.88**	**0.84**	**0.82**	**0.97**	**-0.11**
	(13.6)	(11.2)	(10.8)	(9.6)	(8.3)	(-1.1)
1929-1962	**0.78**	**0.90**	**0.91**	**0.92**	**1.18**	**-0.40**
	(10.0)	(8.3)	(8.9)	(8.2)	(7.4)	(-3.1)
1963-2000	**1.06**	**0.83**	**0.68**	**0.58**	**0.48**	**0.58**
	(8.6)	(7.6)	(6.1)	(4.8)	(3.8)	(4.0)

Table 4: "Bad" cash-flow and "good" discount-rate betas of value and growth stocks
The table reports the "bad" cash-flow betas (top panel) and "good" discount-rate betas (bottom panel) of quintile portfolios formed each year by sorting firms on year-t BE/ME. We allocate 20% of the market's value to each of the five value-weight portfolios. The portfolio $i = 1$ is the extreme growth portfolio (low BE/ME) and $i = 5$ the extreme value portfolio (high BE/ME). "1-5" denotes the difference between extreme growth and value portfolios. BE/ME used in sorts is computed as year $t-1$ BE divided by May-year-t ME. Throughout the table, the market's N_{DR} and N_{CF} are the factors extracted using the full-period estimates of the monthly VAR of Campbell and Vuolteenaho (2004). The bad cash-flow beta is then measured as $\beta_{i,CFM} = \frac{\mathrm{Cov}\left(r_{i,t+1}, N_{M,CF,t+1}\right)}{\mathrm{Var}\left(r_{M,t+1}\right)}$ and the good discount-rate beta as $\beta_{i,DRM} = \frac{\mathrm{Cov}\left(r_{i,t+1}, -N_{M,DR,t+1}\right)}{\mathrm{Var}\left(r_{M,t+1}\right)}$. The t-statistics (in parentheses) do not account for the estimation uncertainty in extraction of the market's news terms.

$\beta_{i,CFM}$ (Bad beta): Growth and value returns on the market's N_{cf}

	Growth	2	3	4	Value	G-V
1929-2000	**0.13**	**0.15**	**0.17**	**0.19**	**0.23**	**-0.10**
	(8.0)	(9.6)	(11)	(13)	(13)	(-8.6)
1929-1962	**0.18**	**0.20**	**0.22**	**0.23**	**0.29**	**-0.11**
	(8.6)	(9.1)	(9.8)	(11)	(11)	(-7.2)
1963-2000	**0.04**	**0.06**	**0.09**	**0.11**	**0.12**	**-0.08**
	(1.6)	(2.7)	(3.9)	(5.5)	(-6.2)	(-4.3)

$\beta_{i,DRM}$ (Good beta): Growth and value returns on the market's $-N_{dr}$

	Growth	2	3	4	Value	G-V
1929-2000	**0.86**	**0.87**	**0.86**	**0.80**	**0.88**	**-0.02**
	(47)	(48)	(46)	(41)	(35)	(-0.8)
1929-1962	**0.76**	**0.82**	**0.84**	**0.82**	**0.99**	**-0.23**
	(33)	(34)	(34)	(31)	(29)	(-7.4)
1963-2000	**1.06**	**0.95**	**0.89**	**0.77**	**0.70**	**0.36**
	(33)	(34)	(32)	(26)	(22)	(9.4)

Table 5: Firm-level VAR parameter estimates (1963-2000)

The table shows the pooled-WLS parameter estimates for a first-order firm-level VAR model. The model state vector includes the log stock return (r), log book-to-market (BM), and five-year average profitability ($\overline{ROE}$). All three variables are market-adjusted, r by subtracting r_M and BM and $\overline{ROE}$ by removing the respective year-specific cross-section means. Rows corresponds to dependent variables and columns to independent (lagged dependent) variables. The first three columns report coefficients on the three explanatory variables, the fourth column reports the corresponding R^2, and the last column shows the resulting estimates of the coefficients of the linear function, $e1'\lambda$, that maps the VAR shocks to discount-rate news. In that function, $e1$ is a vector with first element equal to unity and the remaining elements equal to zeros and $\lambda \equiv \rho\Gamma(I - \rho\Gamma)^{-1}$, where Γ is the point estimate of the VAR transition matrix and ρ is the linearization parameter, which we set equal to .95. Thus, firm-specific news $N_{i,DR}$ is computed as $e1'\lambda u_i$ and $N_{i,CF}$ as $(e1' + e1'\lambda)u_i$ where u_i is the firm-specific matrix of residuals from the VAR. The table also shows the variance-covariance matrix of these news terms, which in turn implies a variance decomposition of market-adjusted firm-level returns. Specifically, the total variance of the return is 0.1690 which corresponds to the sum of the variance of expected-return news (0.0250), the variance of cash-flow news (0.1660), and twice the covariance between the two news components (-0.0110). Standard errors (in parentheses) take into account clustering in each cross section. Sample period for the dependent variables is 1963-2001, 38 annual cross-sections and 121,393 firm-years.

	$r_{i,t}$	$BM_{i,t}$	$\overline{ROE}_{i,t}$	R^2	$e1'\lambda$
$r_{i,t+1}$	.1342	.0796	.1272	0.75%	.2015
(log stock return)	(.0215)	(.0098)	(.0493)		(.0285)
$BM_{i,t+1}$	.0476	.8553	.2174	69.21%	.4372
(log book-to-market)	(.0146)	(.0099)	(.0395)		(.0454)
$\overline{ROE}_{i,t+1}$	.0342	-.0106	.7713	73.79%	.8811
(five-year profitability)	(.0029)	(.0012)	(.0180)		(.2070)

Variance-Covariance Matrix	$N_{i,DR}$	$N_{i,CF}$
Expected-return news ($N_{i,DR}$)	0.0250	-0.0110
	(0.0061)	(0.0060)
Cash-flow news ($N_{i,CF}$)	-0.0110	0.1660
	(0.0060)	(.0191)

Table 6: Firm-level (1963-2000) and the market's cash-flow and discount-rate news
The table reports the firm-level news components of the "bad" cash-flow and "good" discount-rate betas measured for BE/ME-sorted portfolios described in Campbell, Polk, and Vuolteenaho (2008). These components are $\beta_{DRi,CFM} = \frac{\text{Cov}(-N_{i,DR,t+1}, N_{M,CF,t+1})}{\text{Var}(r_{M,t+1})}$, $\beta_{CFi,CFM} = \frac{\text{Cov}(N_{i,CF,t+1}, N_{M,CF,t+1})}{\text{Var}(r_{M,t+1})}$, $\beta_{DRi,DRM} = \frac{\text{Cov}(-N_{i,DR,t+1}, -N_{M,DR,t+1})}{\text{Var}(r_{M,t+1})}$, and $\beta_{CFi,DRM} = \frac{\text{Cov}(N_{i,CF,t+1}, -N_{M,DR,t+1})}{\text{Var}(r_{M,t+1})}$. The market's N_{DR} and N_{CF} are extracted using the annual VAR described in Campbell, Polk, and Vuolteenaho (2008). To construct portfolio news terms, firm-level $N_{i,DR}$ and $N_{i,CF}$ are first extracted from the market-adjusted firm-level panel VAR of Appendix Table 5, then the corresponding market-wide news terms are added back, and finally the resulting firm-level news terms are value-weighted. The t-statistics (in parentheses) ignore estimation uncertainty in the extraction of the news terms.

	Growth	2	3	4	Value	G-V
Bad beta components						
$\beta_{DRi,CFM}$: Growth and value $-N_{DR}$ on the market's N_{CF}						
1963-2000	**-.04**	**-.05**	**-.04**	**-.05**	**-.04**	**-.00**
	(-.80)	(-.87)	(-.77)	(-.81)	(-.75)	(-.05)
$\beta_{CFi,CFM}$: Growth and value N_{CF} on the market's N_{CF}						
1963-2000	**.03**	**.10**	**.13**	**.18**	**.17**	**-.14**
	(1.1)	(7.2)	(8.5)	(8.6)	(5.4)	(-3.1)
Good beta components						
$\beta_{DRi,DRM}$: Growth and value $-N_{DR}$ on the market's $-N_{DR}$						
1963-2000	**.92**	**.95**	**.94**	**.98**	**.99**	**-.06**
	(18)	(20)	(22)	(24)	(25)	(-1.8)
$\beta_{CFi,DRM}$: Growth and value N_{CF} on the market's $-N_{DR}$						
1963-2000	**.14**	**-.05**	**-.14**	**-.24**	**-.36**	**.49**
	(1.81)	(-.82)	(-1.9)	(-2.3)	(-3.3)	(3.9)

Table 7: Alternate Aggregate VAR parameter estimate 1

The table shows the OLS parameter estimates for a first-order aggregate VAR model including a constant, the log excess market return (r^e_M), term yield spread (TY), price-earnings ratio (PE), and the components of the small-stock value spread, the log book-to-market of the small-high portfolio (sh) and the log book-to-market of the small-low portfolio (sl). Each set of two rows corresponds to a different dependent variable. The first five columns report coefficients on the five explanatory variables, the sixth column reports the corresponding adjusted R^2, and the last column shows the resulting estimates of the coefficients of the linear function, $e1'\lambda$, that maps the VAR shocks to discount-rate news. In that function, $e1$ is a vector with the first element equal to unity and the remaining elements equal to zeros and $\lambda \equiv \rho\Gamma(I-\rho\Gamma)^{-1}$, where Γ is the point estimate of the VAR transition matrix and ρ is the linearization parameter, which we set equal to .95. Thus, the market's N_{DR} is computed as $e1'\lambda u$ and N_{CF} as $(e1'+e1'\lambda)u$ where u is the matrix of residuals from the VAR. Standard errors are in parentheses. Sample period for the dependent variables is 1928-2001, 74 annual data points.

	constant	$r^e_{M,t}$	TY_t	PE_t	sh_t	sl_t	$\overline{R}^2$	$e1'\lambda$
$r^e_{M,t+1}$	.8366	-.0195	.0669	-.1771	-.1709	.2090	9.68%	-.0980
(log excess market return)	(.3327)	(.1226)	(.0464)	(.1271)	(.0806)	(.1484)		(.0550)
TY_{t+1}	.4523	-.1070	.3201	-.4369	.5781	-.9058	31.26%	.0372
(term yield spread)	(.7913)	(.2917)	(.1105)	(.3022)	(.1916)	(.3530)		(.0255)
PE_{t+1}	.6774	.0688	.0449	.8060	-.1065	.0739	69.82%	-.8241
(price-earnings ratio)	(.3079)	(.1135)	(.0430)	(.1176)	(.0746)	(.1374)		(.2385)
sh_{t+1}	-.9955	.1387	-.1284	.2477	1.1804	-.2416	81.64%	-.2189
(small-high log BEME)	(.4540)	(.1674)	(.0634)	(.1734)	(.1100)	(.2025)		(.1715)
sl_{t+1}	-1.0240	.0233	-.1031	.1149	.3102	.4271	59.94%	.2348
(small-low log BEME)	(.4477)	(.1650)	(.0625)	(.1710)	(.1084)	(.1997)		(.1112)

Table 8: Alternate Aggregate VAR parameter estimate 2

The table shows the OLS parameter estimates for a first-order aggregate VAR model including a constant, the log excess market return (r_M^e), term yield spread (TY), the log book-to-market ratio (bm), and the small-stock value spread (VS). Each set of two rows corresponds to a different dependent variable. The first five columns report coefficients on the five explanatory variables, the sixth column reports the corresponding adjusted R^2, and the last column shows the resulting estimates of the coefficients of the linear function, $e1'\lambda$, that maps the VAR shocks to discount-rate news. In that function, $e1$ is a vector with the first element equal to unity and the remaining elements equal to zeros and $\lambda \equiv \rho\Gamma(I - \rho\Gamma)^{-1}$, where Γ is the point estimate of the VAR transition matrix and ρ is the linearization parameter, which we set equal to .95. Thus, the market's N_{DR} is computed as $e1'\lambda u$ and N_{CF} as $(e1' + e1'\lambda)u$ where u is the matrix of residuals from the VAR. Standard errors are in parentheses. Sample period for the dependent variables is 1928-2001, 74 annual data points.

	constant	$r^e_{M,t}$	TY_t	bm_t	VS_t	$\overline{R}^2$	$e1'\lambda$
$r^e_{M,t+1}$	.4571	-.0109	.0683	.2159	-.2393	10.97%	-.0476
(log excess market return)	(.1548)	(.1170)	(.0451)	(.0812)	(.0891)		(.0368)
TY_{t+1}	-.3971	.0115	.3533	.0669	.5098	30.27%	.0436
(term yield spread)	(.3736)	(.2823)	(.1089)	(.1959)	(.2151)		(.0264)
bm_{t+1}	-.3665	-.0383	-.0706	.7837	.2169	73.75%	.6937
(log book-to-market ratio)	(.1569)	(.1186)	(.0457)	(.0823)	(.0904)		(.1022)
VS_{t+1}	.2274	.0409	-.0434	.0658	.8871	81.44%	-.3337
(small-stock value spread)	(.1138)	(.0860)	(.0332)	(.0597)	(.0656)		(.1389)

Table 9: Direct firm-level cash-flow news proxies on alternative market news

The table reports sub-period multiple regression betas of cash-flow-news proxies for the two extreme BE/ME-sorted portfolios described in Table 4 on the market's discount-rate and cash-flow news terms. A portfolio's cash-flow news is proxied either by the value-weight average of firms' news terms from the firm-level panel VAR of Table 5, or directly proxied by $\sum_{k=1}^{K} \rho^{k-1}[roe_{i,t,t+k} - .4 * \log(1+r_{f,t+k})]$ where $roe_{i,t,t+k}$ is $\log(1+ROE_{i,t,t+k})$, with $ROE_{i,t,t+k}$ the year $t+k$ clean-surplus return on book equity (for portfolio i sorted at t) and $r_{f,t+k}$ the Treasury-bill return. The panel, "Baseline Aggregate VAR," extracts market news using Table **??**'s estimates; the panel, "Alternate Aggregate VAR 1," allows the components of the VS variable to enter the baseline VAR separately; and the panel, "Alternate Aggregate VAR 2," replaces aggregate P/E with aggregate BE/ME in the baseline VAR. When portfolio news is the dependent variable, each market news term is rescaled by the inverse of its share of market return variance. When ROE is the dependent variable and market news is the independent variable, market news is discounted and summed in a corresponding fashion. The t-statistics (in parentheses) ignore estimation uncertainty in the extraction of the news terms.

	Baseline Aggregate VAR				Alternate Aggregate VAR 1				Alternate Aggregate VAR 2			
	News	K=3	K=4	K=5	News	K=3	K=4	K=5	News	K=3	K=4	K=5
						$\beta_{CFi,CFM}$: 1929-1962						
G	**0.07**	**0.20**	**0.21**	**0.36**	**0.07**	**0.20**	**0.22**	**0.37**	**0.07**	**0.27**	**0.34**	**0.41**
	(5.35)	(0.79)	(0.62)	(1.35)	(5.26)	(0.80)	(0.67)	(1.41)	(3.39)	(1.18)	(1.38)	(2.12)
V	**0.13**	**0.81**	**0.87**	**0.91**	**0.13**	**0.81**	**0.87**	**0.91**	**0.12**	**0.81**	**0.85**	**0.86**
	(7.95)	(4.55)	(4.67)	(5.41)	(7.81)	(4.63)	(4.86)	(5.59)	(4.28)	(6.44)	(9.00)	(10.07)
G-V	**-0.06**	**-0.61**	**-0.66**	**-0.55**	**-0.06**	**-0.61**	**-0.64**	**-0.54**	**-0.05**	**-0.54**	**-0.51**	**-0.45**
	(-2.63)	(-3.15)	(-2.62)	(-3.21)	(-2.62)	(-3.17)	(-2.64)	(-3.23)	(-1.78)	(-2.88)	(-2.56)	(-2.92)
						$\beta_{CFi,DRM}$: 1929-1962						
G	**-0.06**	**0.03**	**0.03**	**-0.01**	**-0.07**	**0.03**	**0.03**	**0.00**	**-0.07**	**-0.02**	**-0.05**	**-0.08**
	(-1.72)	(0.36)	(0.21)	(-0.07)	(-1.82)	(0.46)	(0.28)	(-0.01)	(-1.65)	(-0.21)	(-0.63)	(-0.85)
V	**0.05**	**-0.01**	**0.05**	**0.06**	**0.04**	**-0.02**	**0.04**	**0.05**	**0.02**	**-0.16**	**-0.12**	**-0.08**
	(1.19)	(-0.16)	(0.50)	(0.71)	(0.95)	(-0.25)	(0.44)	(0.64)	(0.32)	(-2.31)	(-1.43)	(-0.97)
G-V	**-0.11**	**0.04**	**-0.02**	**-0.07**	**-0.11**	**0.05**	**0.00**	**-0.05**	**-0.09**	**0.14**	**0.07**	**0.00**
	(-1.98)	(0.52)	(-0.15)	(-0.48)	(-1.88)	(0.69)	(-0.03)	(-0.37)	(-1.49)	(1.34)	(0.49)	(0.01)
						$\beta_{CFi,CFM}$: 1963-2000						
G	**0.03**	**0.25**	**0.21**	**0.32**	**0.03**	**0.29**	**0.27**	**0.39**	**0.01**	**0.36**	**0.63**	**0.69**
	(1.45)	(1.23)	(0.93)	(1.14)	(1.27)	(1.39)	(1.12)	(1.32)	(0.35)	(2.19)	(2.41)	(2.56)
V	**0.15**	**0.33**	**0.32**	**0.46**	**0.15**	**0.32**	**0.31**	**0.45**	**0.16**	**0.03**	**0.00**	**0.16**
	(6.69)	(2.84)	(3.56)	(4.98)	(6.92)	(2.59)	(3.14)	(4.80)	(5.45)	(0.22)	(0.02)	(0.93)
G-V	**-0.11**	**-0.07**	**-0.11**	**-0.14**	**-0.12**	**-0.03**	**-0.04**	**-0.06**	**-0.15**	**0.33**	**0.63**	**0.53**
	(-3.09)	(-0.29)	(-0.47)	(-0.58)	(-3.32)	(-0.10)	(-0.16)	(-0.23)	(-3.66)	(1.20)	(2.12)	(1.77)
						$\beta_{CFi,DRM}$:1963-2000						
G	**0.14**	**0.22**	**0.22**	**0.20**	**0.14**	**0.21**	**0.20**	**0.18**	**0.14**	**0.18**	**0.11**	**0.08**
	(2.10)	(5.30)	(6.58)	(5.11)	(2.10)	(4.88)	(5.71)	(4.20)	(2.37)	(2.54)	(1.31)	(0.90)
V	**-0.30**	**-0.07**	**-0.07**	**-0.10**	**-0.32**	**-0.08**	**-0.08**	**-0.10**	**-0.39**	**-0.07**	**-0.05**	**-0.10**
	(-4.62)	(-2.77)	(-2.34)	(-2.92)	(-5.03)	(-2.92)	(-2.49)	(-3.18)	(-6.29)	(-1.59)	(-0.87)	(-1.82)
G-V	**0.44**	**0.29**	**0.29**	**0.30**	**0.46**	**0.29**	**0.28**	**0.28**	**0.53**	**0.25**	**0.16**	**0.18**
	(4.09)	(6.69)	(10.76)	(11.26)	(4.37)	(6.62)	(10.35)	(10.14)	(6.17)	(2.60)	(1.52)	(1.78)

Table 10: "Bad" cash-flow and "good" discount-rate betas of HML across VAR specifications

The table reports the sub-period "bad" cash-flow betas (top panel) and "good" discount-rate betas (bottom panel) for the HML factor of Fama and French (1993) that result from ten different first-order aggregate VAR specifications. Throughout the table, the market's N_{DR} and N_{CF} are the factors extracted using the full-period estimates of those VARs. The bad cash-flow beta is measured as $\beta_{i,CFM} = \frac{\mathrm{Cov}\left(r_{i,t+1}, N_{M,CF,t+1}\right)}{\mathrm{Var}\left(r_{M,t+1}\right)}$ and the good discount-rate beta as $\beta_{i,DRM} = \frac{\mathrm{Cov}\left(r_{i,t+1}, -N_{M,DR,t+1}\right)}{\mathrm{Var}\left(r_{M,t+1}\right)}$. The VAR specifications are as follows: GorG is the specification estimated in Campbell, Polk, and Vuolteenaho (2008) Table 2 that includes a constant, the log excess market return (r^e_M), term yield spread (TY), log price-earnings ratio (PE), and small-stock value spread (VS). ALT1 is the specification estimated in Appendix Table 7 that modifies the GorG specification by replacing VS with its components: the log book-to-market of the small-high portfolio (sh) and the log book-to-market of the small-low portfolio (sl). ALT2 is the specification estimated in Appendix Table 8 that modifies the GorG soecification by replacing the price-earnings ratio (PE) with the log book-to-market ratio (bm). Specifications ALT3, ALT4, ALT 5, ALT6, ALT7, and ALT8 modify the GorG specification by replacing the price-earnings ratio (PE) with the book-to-market ratio (BM), the log dividend-to-price ratio (dp), the dividend-to-price ratio (DP), the price-earning ratio where earnings are only smoothed over the past five years (PE^{5-yr}), the price-earning ratio where earnings are only smoothed over the past two years (PE^{2-yr}), and the price-earning ratio where earnings are only smoothed over the past year (PE^{1-yr}) respectively. ALT9 modifies the GorG specification by replacing VS with its components: the book-to-market of the small-high portfolio (SH) and the book-to-market of the small-low portfolio (SL). The t-statistics (in parentheses) do not account for the estimation uncertainty in extraction of the market's news terms.

	GorG	ALT1	ALT2	ALT3	ALT4	ALT5	ALT6	ALT7	ALT8	ALT9
$\beta_{HML,CFM}$ (Bad beta): Growth and value returns on the market's N_{cf}										
1929-1962	.1376	.1399	.1523	.1441	.1499	.1716	.1563	.2027	.2103	.1474
	(3.40)	(3.49)	(3.57)	(1.70)	(2.09)	(2.39)	(3.20)	(3.03)	(2.87)	(3.51)
1963-2000	.1001	.1081	0.1178	.0221	-.1465	-.2017	.0358	-.0761	-.1098	.0011
	(2.46)	(2.63)	(2.25)	(0.22)	(-1.53)	(-1.71)	(0.62)	(-0.86)	(-1.01)	(0.03)
$\beta_{HML,DRM}$ (Good beta): Growth and value returns on the market's $-N_{dr}$										
1929-1962	.3206	.3158	0.2854	.2146	.2694	.2418	.2739	.2117	.2024	.2507
	(2.98)	(2.96)	(3.19)	(2.18)	(2.81)	(2.82)	(3.01)	(2.89)	(3.02)	(2.49)
1963-2000	-.4307	-.4421	-.4610	-.3624	-.2456	-.1853	-.3992	-.3153	-.2835	-.4204
	(-4.00)	(-4.17)	(-5.34)	(-4.72)	(-1.78)	(-1.87)	(-4.19)	(-3.50)	(-2.78)	(-4.18)

Table 11: "Bad" cash-flow and "good" discount-rate betas' components: firm-level regressions, annual returns

The table shows pooled-WLS parameter estimates of an firm-level multiple regression forecasting the annual cross products $(N_{DR} + N_{CF}) * (N_{CF,i} + N_{DR,i})$, $(N_{CF}) * (N_{CF,i} + N_{DR,i})$, and $(N_{DR}) * (N_{CF,i} + N_{DR,i})$ in columns 1, 2, and 3. As the regression coefficients are divided by the estimated market annual return variance, these regressions essentially forecast firms' betas (β_i) as well as their bad ($\beta_{i,CFM}$) and good ($\beta_{i,DRM}$) components. The table also shows the resulting bad-beta and firm-level-CF share of those estimates in columns 4, 5, and 6 respectively. The market's N_{DR} and N_{CF} are extracted using the annual VAR described in Campbell, Polk, and Vuolteenaho (2008). All variables are market-adjusted by removing the corresponding year-specific cross-section mean. Independent variables, described in the text, are normalized to have unit variance. All t-statistics (in parentheses) and standard errors (in braces, calculated using the delta method) take into account clustering in each cross section but do not account for the estimation uncertainty in extraction of the market's news terms.

	Forecasting regressions			Shares		
	β_i (Market Beta)	$\beta_{i,CFM}$ (Bad Beta)	$\beta_{i,DRM}$ (Good Beta)	$\frac{\beta_{i,CFM}}{\beta_i}$	$\frac{\beta_{CFi,CFM}}{\beta_{i,CFM}}$	$\frac{\beta_{CFi,DRM}}{\beta_{i,DRM}}$
ME_i	-0.154	-0.039	-0.114	0.256	0.971	0.886
(size)	(-1.73)	(-1.77)	(-1.47)	[0.13]	[0.06]	[0.05]
BE_i/ME_i	-0.105	-0.005	-0.100	0.044	0.617	1.007
(book-to-market ratio)	(-2.13)	(-0.42)	(-2.24)	[0.10]	[0.85]	[0.04]
β_i	0.161	-0.004	0.164	-0.023	0.977	0.857
(market beta)	(2.33)	(-0.21)	(2.63)	[0.11]	[0.43]	[0.02]

Table 12: "Bad" cash-flow and "good" discount-rate betas: firm-level regressions, monthly covariances

The table shows pooled-WLS parameter estimates of firm-level simple regressions forecasting the annual subsequent average monthly cross products $(N_{DR,t} + N_{CF,t} + N_{DR,t-1} + N_{CF,t-1}) * (R_{i,t})$, $(N_{CF,t} + N_{CF,t-1}) * (R_{i,t})$, and $(N_{DR,t} + N_{DR,t-1}) * (R_{i,t})$. As the regression coefficients are divided by the estimated market monthly return variance, these regressions essentially forecast firms' betas (β_i) as well as their bad ($\beta_{i,CFM}$) and good ($\beta_{i,DRM}$) components. The table also shows the resulting bad-beta share of those estimates in column 4. The market's N_{DR} and N_{CF} are the monthly news terms from Campbell and Vuolteenaho (2004). All variables are market adjusted by removing the corresponding year-specific cross-section mean. Independent variables, described in the text, are scaled to have unit variance. Regression coefficients are divided by the estimated market monthly return variance. All t-statistics (in parentheses) and standard errors (in braces) take into account clustering in each cross section but do not account for the estimation uncertainty in extraction of the market's news terms.

	Forecasting regressions						Shares	
	β_i (Market Beta)		$\beta_{i,CFM}$ (Bad Beta)		$\beta_{i,DRM}$ (Good Beta)		$\frac{\beta_{i,CFM}}{\beta_i}$	
β_i	0.2875	(6.81)	0.0140	(1.00)	0.2721	(5.98)	0.05	[0.05]
	1.17%		0.00%		1.17%			
$\sigma_i(r_i)$	0.2988	(5.86)	0.0182	(1.04)	0.2791	(5.07)	0.06	[0.06]
	1.26%		0.00%		1.23%			
β_i^{ROA}	-0.0830	(-5.27)	-0.0190	(-3.82)	-0.0640	(-4.72)	0.23	[0.05]
	0.37%		0.17%		0.24%			
$\sigma_i(ROA_i)$	0.1897	(5.49)	0.0162	(1.71)	0.1726	(4.91)	0.09	[0.05]
	1.06%		0.04%		0.78%			
ROA_i	-0.1122	(-4.61)	-0.0195	(-2.21)	-0.0918	(-3.31)	0.17	[0.10]
	0.29%		0.05%		0.17%			
$Debt_i/A_i$	0.0195	(1.26)	0.0189	(3.93)	0.0012	(0.07)	0.97	[0.81]
	0.01%		0.05%		0.00%			
$CAPX_i/A_i$	-0.0033	(-0.31)	-0.0034	(-1.13)	-0.0001	(-0.01)	1.01	[2.94]
	0.00%		0.00%		0.00%			

Table 13: "Bad" cash-flow and "good" discount-rate betas: firm-level tests, annual returns

The table shows pooled-WLS parameter estimates of firm-level simple regressions forecasting the annual cross products $(N_{DR} + N_{CF}) * (N_{CF,i} + N_{DR,i})$, $(N_{CF}) * (N_{CF,i} + N_{DR,i})$, and $(N_{DR}) * (N_{CF,i} + N_{DR,i})$ in columns 1, 2, and 3. As the regression coefficients are divided by the estimated market annual return variance, these regressions essentially forecast firms' betas (β_i) as well as their bad ($\beta_{i,CFM}$) and good ($\beta_{i,DRM}$) components. The table also shows the resulting bad-beta and firm-level-CF share of those estimates in columns 4, 5, and 6 respectively. The market's N_{DR} and N_{CF} are extracted using the annual VAR from Campbell, Polk, and Vuolteenaho (2008). All variables are market adjusted by removing the corresponding year-specific cross-section mean. Independent variables, described in the text, are normalized to have unit variance. Regression coefficients are scaled by an estimate of the market's variance. All t-statistics (in parentheses) and standard errors (in braces, calculated using the delta method) take into account clustering in each cross section but do not account for the estimation uncertainty in extraction of the market's news terms.

	Forecasting regressions			Shares		
	β_i (Market Beta)	$\beta_{i,CFM}$ (Bad Beta)	$\beta_{i,DRM}$ (Good Beta)	$\frac{\beta_{i,CFM}}{\beta_i}$	$\frac{\beta_{CFi,CFM}}{\beta_{i,CFM}}$	$\frac{\beta_{CFi,DRM}}{\beta_{i,DRM}}$
β_i	0.174	0.000	0.174	-0.003	1.775	0.865
(market beta)	(2.21)	(-0.02)	(2.45)	[0.11]	[36.01]	[0.02]
	0.71%	0.00%	0.76%			
$\sigma_i(r_i)$	0.188	0.017	0.172	0.089	1.079	0.870
(idiosyncratic risk)	(1.67)	(0.64)	(1.68)	[0.12]	[0.24]	[0.06]
	0.83%	0.05%	0.74%			
$Beta_i^{ROA}$	-0.062	-0.019	-0.043	0.307	0.982	0.707
(profitability beta)	(-1.32)	(-2.50)	(-1.00)	[0.19]	[0.07]	[0.16]
	0.13%	0.11%	0.07%			
$\sigma_i(ROA_i)$	0.126	0.014	0.112	0.110	1.119	0.905
(profitability volatility)	(1.75)	(0.81)	(1.73)	[0.12]	[0.23]	[0.05]
	0.43%	0.04%	0.37%			
ROA_i	0.058	0.020	0.038	0.349	1.167	0.657
(firm profitability)	(1.24)	(1.60)	(0.89)	[0.27]	[0.16]	[0.44]
	0.08%	0.08%	0.04%			
$Debt_i/A_i$	0.012	0.019	-0.008	1.637	0.986	0.889
(book leverage)	(0.42)	(3.52)	(-0.28)	[3.77]	[0.04]	[0.34]
	0.00%	0.08%	0.00%			
$CAPX_i/A_i$	-0.014	-0.006	-0.007	0.458	0.916	1.137
(capital expenditure)	(-0.51)	(-0.93)	(-0.30)	[0.81]	[0.09]	[0.75]
	0.00%	0.01%	0.00%			