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()
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(// : // :)

(β)

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¹. Stock return anomalies
². Size effect

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S & P 500

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$$SGR_{iq} = \frac{S_q - S_{q-1}}{S_{q-1}}$$

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$$Z_i = \alpha + \beta_1 WCTA + \beta_2 CACL + \beta_3 PBTA + \beta_4 TETA + \beta_5 STA + e$$

- () : Z_i
- () : $WCTA$
- () : $CACL$
- () : $PBTA$
- () : $TETA$
- () : STA
- : β
- : e

t

$$R_{it} = \frac{D_t + (P_t - P_{t-1})}{P_{t-1}}$$

$$) \quad (R_m(t) - R_f(t)) \quad \bullet$$

(

$$(R_p(t) - R_f(t)) \quad \bullet$$

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Eviews

t F

(Z₃*Z₁*) (SGR₃*SGR₁*)

()

[]

(Z) (SGR)

(SGR₁) (SGR₂) (SGR₃)

(Z₁) (Z₂) (Z₃)

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| (z) | | | | |
|---------------------------------|---------------------------------|---------------------------------|-------------|-------|
| low | mid | high | | |
| Z ₁ SGR ₃ | Z ₂ SGR ₃ | Z ₃ SGR ₃ | High | (SGR) |
| Z ₁ SGR ₂ | Z ₂ SGR ₂ | Z ₃ SGR ₂ | Mid | |
| Z ₁ SGR ₁ | Z ₂ SGR ₁ | Z ₃ SGR ₁ | Low | |

Z₁*

Z₃* Z₂*

()

SGR₃* SGR₂* SGR₁*

(SGR₁)

(SGR₃)

(SGR₂)

()

Z₁ = (Z - Score ≤ 0.4)

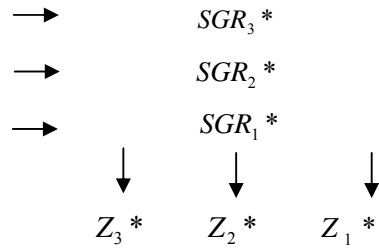
Z₂ = (0.4 < Z - Score ≤ 0.6)

Z₃ = (Z - Score > 0.6)

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| (z) | | | | |
|-------------|-------------|-------------|------|-------|
| low | mid | high | | |
| $Z_1 SGR_3$ | $Z_2 SGR_3$ | $Z_3 SGR_3$ | high | (SGR) |
| $Z_1 SGR_2$ | $Z_2 SGR_2$ | $Z_3 SGR_2$ | mid | |
| $Z_1 SGR_1$ | $Z_2 SGR_1$ | $Z_3 SGR_1$ | low | |



(Z₃*)

Z₃* Z₁*

(Z₁*)

SGR₃* SGR₁*

(SGR₁*)

(SGR₃*)

$$R_p(t) - R_f(t) = a + j(SGR_3^* SGR_1^*)(t) + e(t)$$

$$H_0 : J = 0$$

$$H_1 : J \neq 0$$

$$(R_p(t) - R_f(t))$$

$$SGR_3^* SGR_1^*$$

SGR_3^*

SGR_1^*

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| R^2 | Prob (F-statistic) | F- statistic | $t(j)$ | $t(\alpha)$ | J | α | |
|-------|-----------------------|-----------------|--------|-------------|-----|----------|--------------------|
| / | / | / | / | / | / | / | $R_{Z1SGR1} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z1SGR2} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z1SGR3} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z2SGR1} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z2SGR2} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z2SGR3} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z3SGR1} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z3SGR2} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z3SGR3} - R_F$ |

F

P-value

Z3SGR3 Z1SGR3

t $SGR_3^* SGR_1^*$

%

$$R_p(t) - R_f(t) = a + k(Z_3 * Z_1^*)(t) + e(t)$$

$$H_0 : k = 0$$

$$H_1 : k \neq 0$$

$$(R_p(t) - R_f(t))$$

$Z_3^* Z_1^*$

Z_3^*

Z_1^*

()

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| R^2 | Prob (F-statistic) | F- statistic | $t(k)$ | $t(\alpha)$ | k | α | |
|-------|-----------------------|-----------------|--------|-------------|---|----------|--------------------|
| / | / | / | / | / | / | / | $R_{Z1SGR1} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z1SGR2} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z1SGR3} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z2SGR1} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z2SGR2} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z2SGR3} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z3SGR1} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z3SGR2} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z3SGR3} - R_F$ |

F

P-value

t $Z_3^* Z_1^*$

%

$$R_p(t) - R_f(t) = a + b[R_m(t) - R_f(t)] + e(t)$$

$$H_0 : b = 0$$

$$H_1 : b \neq 0$$

$$(R_p(t) - R_f(t))$$

$(R_m(t) - R_f)$
 $)$
 $($
 $:$
 $:()$

| R^2 | Prob (F-statistic) | F- statistic | $t(b)$ | $t(\alpha)$ | b | α | |
|-------|-----------------------|-----------------|--------|-------------|-----|----------|--------------------|
| / | / | / | / | / | / | / | $R_{Z1SGR1} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z1SGR2} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z1SGR3} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z2SGR1} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z2SGR2} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z2SGR3} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z3SGR1} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z3SGR2} - R_F$ |
| / | / | / | / | / | / | / | $R_{Z3SGR3} - R_F$ |

F P-value

$Z1SGR2$
 $t \quad R_m - R_f$
 $\%$

$$R_p(t) - R_f(t) = a + b(R_m(t) - R_f) + k(Z_3 * Z_1^*) + j(SGR_3 * SGR_1^*) + e(t)$$

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| R^2 | Prob (F-statistic) | $t(j)$ | $t(k)$ | $t(b)$ | $t(a)$ | j | k | b | α | |
|-------|--------------------|--------|--------|--------|--------|-----|-----|-----|----------|--------------------|
| / | / | / | / | / | / | / | / | / | / | $R_{Z1SGR1} - R_F$ |
| / | / | / | / | / | / | / | / | / | / | $R_{Z1SGR2} - R_F$ |
| / | / | / | / | / | / | / | / | / | / | $R_{Z1SGR3} - R_F$ |
| / | / | / | / | / | / | / | / | / | / | $R_{Z2SGR1} - R_F$ |
| / | / | / | / | / | / | / | / | / | / | $R_{Z2SGR2} - R_F$ |
| / | / | / | / | / | / | / | / | / | / | $R_{Z2SGR3} - R_F$ |
| / | / | / | / | / | / | / | / | / | / | $R_{Z3SGR1} - R_F$ |
| / | / | / | / | / | / | / | / | / | / | $R_{Z3SGR2} - R_F$ |
| / | / | / | / | / | / | / | / | / | / | $R_{Z3SGR3} - R_F$ |

F P-value

Z3SGR3 Z3SGR2 Z1SGR2

Z3SGR2 Z2SGR3

t $Z_3 * Z_1^*$

t $R_m - R_f$

Z3SGR2 Z1SGR2

•

$SGR_3 * SGR_1^*$

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$Z_3^* Z_1^*$

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$$R_p(t) - R_f(t) = a + b[R_m(t) - R_f] + e(t)$$

$$R_p(t) - R_f(t) = a + k(Z_3^* Z_1^*) + j(SGR_3^* SGR_1^*) + e(t)$$

$$R_p(t) - R_f(t) = a + b(R_m(t) - R_f) + k(Z_3^* Z_1^*) + j(SGR_3^* SGR_1^*) + e(t)$$

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R^2

$(R_m - R_f)$

$Z_3 * Z_1 * SGR_3 * SGR_1 *$

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