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Introduction

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2 Sociobiology, Evolutionary Psychology, and Behavioral Ecology

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3 Economic Sciences

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4 Neuroscience, Hormones, and Genomics

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5 Conclusion

Acknowledgments

References

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1. B D E (1992), E B , @A (1), ,9 40 3	
2. J. D F A . (1999), F F : Evolution and Efficient Markets’, ,BC (18), A ,9991 2 35	
3. J. D F (2002), F ,E E , ,DD (5), ,895 953 37	
4. J. , A. D. (2003), B :A AD C , ,BE (1), ,324 43 96	
5. D H (2003), G D : -F%% (3), J ,1009 32 116	
6. A . (2004), A H : Efficiency from an Evolutionary Perspective’, 0 ,EG (5), 15 29 140	
7. , A. , J Westerfeld (2006), ‘The Price Impact and Survival of Irrational , -H% (1), F ,195 229 155	
\$ 8. A. B ,C H. H F . . (2005), E D , ,ID\$(1 2), F ,7 42 190	
9. A . ,D B . (2005), F G F :AC D - , B@ (2), ,352 9 226	
10. G , H ,C - H ,E D , F (2012), D C C E , ,EEA\$(6106), , 496 500 234	
11. A . (2012), A , CA (2), A ,18 29, E 239	

:89!\$%%\$ 6FJ -K!%J<\$J;\$;%9=?\$8<L\$%<?!%K!%J<?

12. G. , J . (1964), E
F , , I (1), , 225 72 255
13. C H - (1991), A D F
E A I C H ,
, DI (2), 127 48 303
14. G (1995), E C ,
, CM\$(1), , 223 50 325
15. J C.J. . B J . G (2009), A G
E B , I
,
MN (1), , 1 20 353

:89!\$%%\$ <6K9J?1%6<16

16. H C. B , I A , D , A D
(2001), F I
E E G ,
, EG (2), , 619 39 375
17. A . D . (2002),
- F ,
, DI (3), A , 323 39 396
18. C . B (2005), B
F , , IM (5), , 763 70 413
19. B D , D , B
J. D (2006), F , B , D -
H B , , EDE, (5787), A , 684 7 421
20. E F C F. C (2007),
C
, DD (10), , 419 27 425
21. . , C . F , C A.
(2007), B A D -
, ED\$(5811), J , 515 18 434
22. B (2009), D
A F D ,
, D, 383 88, C1 C3, 389 404 438
23. E F A (2011),
F E C A ,
, N@ (4), F , 3 30 463
24. A . (2013), F , G , F C : A
C , J - F
J A. (), , III,
C 23, , , A: C ,
622 62 491

:89!\$F\$ OJ9 = J<6?

25. J. , A H . (2005),
 , IA (5), D , 522 7 535

26. C. B (2007), H -
 G , NMI (1623), , 2327 30 541

27. C . A , A D , B C , B.
 G , H A C. (2008),
 F , ,
 NB (6), , 384 90 545

28. J. . C J. H (2008), E
 F F ,
 , DG@ (16), A , 6167 72 552

29. B C. C , A D , C . A , D . A.
 E , B. G , A C. , J . G ,
 J. (2010),
 E , D ,
 , BB\$(4), , 451 6 558

30. A D , D G. , J . G ,
 G. , J. (2011),
 D C D D : F
 B ,
 , IE (1), A , 19 38 564

:89!\$F\$ P6<J = %1?

31. A D , C . A , D . A. E , J .
 G , , J. B C
 (2009), 7 D D₄ G
 () A F - ,
 , EG (2), , 85 92 587

32. A B , H C (2010),
 : D I B ? ,
 , BA\$(3), D , 583 604 595

33. D C , J ,
 B (2010), G ,
 F D - , , -HF (5),
 , 1725 54 617

34. D C , J , .E.
 B (2012), B G B
 A , , @A (1), J , 21 34 647

82Q&+R,#S4#7 #&'5

A A A : B D , D C C C
J. D (2006), F , B , D - H
B , , EDE, (5787), A , 684 7; , C . F , C
A. (2007), B A D -
, ED@\$(5811), J , 515 18; G , H , C -
H , E D , F (2012), D C
C E , , EEAS(6106), , 496 500.

A E A : J. , A.
D. (2003), B : A AD C , BE
(1), , 324 43; A , D B . (2005), F
G F : AC D - ,
, B@ (2), , 352 9; E F A (2011),
F E C A ,
, N@ (4), F , 3 30.

A F A , J , : D
H (2003), G D : ,
, -F%%(3), J , 1009 32 (:// . . / /10.1111/1540-
6261.00556/full); Leonid Kogan, Stephen A. Ross, Jiang Wang and Mark M. Westerfeld
(2006), I I , -H% (1),
F , 195 229 (:// . . / /10.1111/ .1540-6261.2006.00834. /
); D C , J , B
(2010), G F D - , -HF
(5), , 1725 54 (:// . . / /10.1111/ .1540-6261.2010.01592. /
).

A C C C :
B (2009), D A F D ,
, D, 383 88, C1 C3, 389 404; D J. B ,
D C , C F. C , E . G , D I ,
Gu nason, Tamara B. Harris, Lenore J. Launer, Shaun Purcell, Albert Vernon Smith, Magnus
J , .E. , J . B , A. C , C
. A , B H , J F , . H , . H , A

G , C . H (2012),
G , I, 627 62, C1.

C : A . (2013), F , G , F
C : AC , J - F J A.
(), , III, C 23, 622 62.

CFAI : A . (2012), A ,
, CA (2), A , 18 29, E .

E : C H - (1991), A D F
E A I C H ,
, DI (2), 127 48; B D E (1992), E
B , , @A (1), , 9 40; G (1995), E
C , CM\$ (1), , 223 50; H C.
B , I A , D , A D (2001), F

I I : A . (2004), A H :
 Market Efficiency from an Evolutionary Perspective',
 , EG (5), 15 29.

I : A . D . (2002),
 - F , , DI (3), A ,
 323 39.

A , A : J. D F A . (1999),
 'Frontiers of Finance: Evolution and Efficient Markets',
 , BC (18), A , 9991 2; J. . C J. H (2008), E
 F , F ,
 , DG@ (16), A , 6167 72.

J. D F (2002), C C C :
 , DD (5), , 895 953.

: C. B (2007), H -
 G , , NMI
 (1623), , 2327 30.

B B. . : A D , D G. ,
 , J . G , G. , J. (2011),
 D C D D : F
 B , , IE (1), A , 19 38.

G. , J. : (1964), E
 F , , I (1), , 225 72.

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