*

:

. : -1 -2

-3

. (58) . (329) . 2003 . 1998

: **.1**

: .

(Dechow, 1994) (2004)

*

. 2005/9/7 .2006/11/29

 •••

```
-2
                                                                 .(Kothari, 2001)
                                                     -3
                                                     -4
                                                                           )
                                                              (Hackel and Livnat, 1996,
                                                                                                                  p.8)
                         . (Sloan, 1996)
                                                                                                                     )
                                                                     .(Young and O'Byrne, 2001, p. 372) "
                                                                                                 .2
(Callen and
                                                              .(
                              Segal, 2004; Sloan, 1996)
                                                     -1
                                                     -2
                                                     -3
                                                                                                                    -1
                                                     -4
```

- 349 -

```
. (Required Expenditures)
                                                                                                  .3
     (Discretionary Expenditures)
                                                                                          (Surplus Cash Flow)
                                                                                                  (Excess Cash Flow)
                                                                                              (Distributable Cash Flow)
                                                                                                 .(Disposable Cash Flow)
                                                               (Hackel and Livnat,
                                                                                                           .1996, p. 273)
                                               ) "
                    .(2002
                                                               (Beneda,
                                                                                                                   2003)
                                                                              .(Damodaran, 1997, p. 171) "
                       .(Christensen and Demski, 2003)
                                                                .(Penman, 2004, p. 324) "
          )
                                                  (2003)
                                                                (Free Cash Flow
                                                                                                     :for Firm) (FCFF)
                           .(2001
                                        )
                                                                   .(White, et al., 1997, p. 105) "
                                                               (Free Cash Flow
                                                                                                     :for Equity) (FCFE)
    .(2003
                                                                                     .(Damodaran, 1997, p. 172) "
                                                                                             :
(Wilson,
 .(2001
                      1986; Ali, 1994; Batrov et al., 2001)
```

.

```
(Supplemental Disclosure)
                         (Sloan, 1996)
                                                               (Biddle et al.,
                                                                                                                 1995)
                                                               (Batrov et al.,
                                                                                                                 2001)
        )
                                       (2002
                                                                      (Batrov et al., 2001)
                                                                                .(1999
                                                                                               )
     )
                                                                                                   .4
                                         (2003
(Accruals)
                                                                                                 (Accruals)
                 (2004
                                 )
                                                               .(Gentry et
                                                                                       al., 2002; Callen and Segal, 2004)
                                                                             (Vogt and Vu, 2000)
(2004
                                                                               (Francis et al., 2000)
                                                               (Market Value (MVE)
                                                                                                             of Equity)
```

.5) (2005 $:H_{01}$ $:H_{02}$:H₀₃ $:H_{04}$.(Christensen and Demski, 2003) (2004) $:H_{05}$:H₀₆) (Shamia and Talafha, 1990) (1988 :H₀₇ .(2005 2003) - 1 $R_{it} = a_0 + a_1 \ FCFE_{it} + e_t.$ 2001 2004 2001) (2005 2005 a_1 a_0 R_{it} i .t FCFE_{it} .t e_{t} -2 :) $R_{it} = a_0 + a_1 \ FCFF_{it} + e_t. \label{eq:Rit}$

```
a_0
                                                                    R_{it}
                                                                                               .t
                                                                                                                                                             R_{it}
   .t
                                                               FCFE<sub>it</sub>
                                                                                           .t
                                                                                                                                                       FCFF<sub>it</sub>
                                                                CFO_{it}
I
                                                                .t
                                                                                            R_{it} = a_0 + a_1 AE_{it} + e_t.
                                                                                             R_{it} = a_0 + a_1 \ FCFE_{it} + e_t. \label{eq:Rit}
                                                                                                                                                            R_{it}
                                                       :(Stock Returns)
                                                                                          .t
                                                                                                                                                           AE_{it}
4/30
                                        5/1
                                                                                                                                                       FCFE<sub>it</sub>
                                       (t+1)
   ) (
                                                                                                                                                                   -5
                                               .(2002
                                                                                            R_{it} = a_0 + a_1 CFO_{it} + e_t.
                                                                                             R_{it} = a_0 + a_1 FCFE_{it} + e_t.
R_{it} = \frac{P_{it} - P_{i(t-1)} + D_{it}}{P_{i(t-1)}}
                                                                                                                                               a_1
                                                                                                                                                               a_0
                                                                     :
                                                                                              .t
                                                                                                                                                            R_{it} \\
                 .t i
                                                                    :Rit
                                                                                        Ι
                                                                                                                                                        CFO_{it}
             .t
                                                                     :Pit
                                                                                                                                                        .t
     .(t-1)
                                                                                                                                                       FCFE<sub>it</sub>
                                                                :Pi(t-1)
                                                                                           .t
     .t i
                                                                    :Dit
                                                                                                                                                                  -6
                                                                      -1
                                                                                            R_{it} = a_0 + a_1 FCFE_{it} + et.
(Free Cash (FCFF)
                                                         :Flow of Firm)
                                                                                            R_{it} = a_0 + a_1 A E_{it} + a_2 F C F E_{it} + e_t.
                                                                                                                                                        a_1 a_0
 (Revsine et al., 1997, p.212) "
                                                                                                                                                             R_{it}
                                                                                                                                                       FCFE<sub>it</sub>
                                                                                                                                                           AE_{it}
                                                                                                                                                                   -7
                               .(Revsine, et al., 1997, p.212)
                                                                      -2
(Free Cash Flow of
                                                        :Equity) (FCFE)
                                                                                            R_{it} = a_0 + a_1 FCFE_{it} + e_t.
                                                                                            R_{it} = a_0 + a_1 \ CFO_{it} + a_2 \ FCFE_{it} + e_t.
```

```
.(
                                                                                                     .(Penman, 2001; Richardson, 2002)
                                                                                                                                    -3
                                                                         i
                                                                                                                       .t
                                                                                                                                    -4
                                                                             .t
                                                                                                  i
                                                   .(
                                                                                    2003
                                                                                                  1998
                                                                                                                  93
                            :
                                       (1)
               )
%5
                                                   (R_{it}) (
                                                            %1
     %25 (FCFE<sub>it</sub>)
                                                                                                   .12/31
                                              %5
                       (R_{it})
                                                        (FCFE<sub>it</sub>)
                   %10 (FCFF<sub>it</sub>)
                                                                                                             58
                                                            %10
                                                                                                                                      329
(FCFF<sub>it</sub>)
                                                                                                                           .2003-1998
                                 (R_{it})
                                                                                                                                    1
                                                                                                                    1998
             %31 (CFO<sub>it</sub>)
                                                       %5
                                                                                                 )
```

- 354 -

•••

(1)

AEit	OCF _{it}	FCFF _{it}	FCFE _{it}	R _{it}	
**0.40	**0.31	*0.10	** 0.25	-	R_{it}
**0.31	**0.68	**0.71	-		FCFE _{it}
*0.13	** 0. 47	1			FCFF _{it}
***0.40	-				OCF_{it}
_					AE _{it}
	0/.5		**	0/ 1	***

(2)

	$\mathbf{a_0}$	$\mathbf{a_1}$	R	R2	Adj- R ²	t	F
FCFEit	0.07	0.46	25%	6.2%	6%	4.646***	21.6***
%5				**	%1		***
				.%10		*	

(Gentry, et al.,

.2002; Penman, 2004) $R_{it} = 0.07 + 0.46 \text{ FCFE}_{it}.$

-

(3) (Adj-R²) %10 %0.7 $R_{it} = .06 + .14FCFF_{it} + e_t. \label{eq:Rit}$ (4) %1 (3) (2) %16 %16.3 Adj-) (R^2) $(FCFE_{it})$ (Adj-R²) (FCFE_{it}) (3) ${I\!\!R}^2$ Adj- R² R \mathbf{F} t \mathbf{a}_0 \mathbf{a}_1 **FCFFit** 0.06 0.14 10% 1% 0.7% 3.331* 1.825* \ %5 ** %1 *** .%10

(4)

	\mathbf{a}_0	$\mathbf{a_1}$	R	\mathbb{R}^2	Adj-R ²	F	t
AEit	0.02	0.43	40%	16.3%	16%	63.8***	7.99***
	%5			**	* %1		***
					.%10		*

1994; Plenborg, 1999; Gentry, et al., 2002; Francis, et al., .2003)

 $R_{it} = 0.02 + 0.43 AE_{it.}$

2001) 2004 2004 2002 (Dechow, (2005 2005 .

```
.(2005
                                                                                                                   (Biddle, et al., 1995)
                                                                                     (Adj-R^2)
(Gentry et al., 2002; Callen and Segal, 2004;
                                                                                                                    .(2003
                                                                                                                                       )
                                                    .Penman, 2004)
                                                                                                 (Adj-R<sup>2</sup>)
                                                                                                                                           (Adj-R^2)
     (5)
                                                                  %1
      %9.2 (Adj-R<sup>2</sup>)
                                                                                              %16
                                                                                                                                        %1
                                                                                                               %6
                                                                               %1
                                                                                                                           (2
                                                                                                                                                    )
                                                                 (5)
                                                                               \mathbb{R}^2
                                                                    R
                                                                                         Adj- R<sup>2</sup>
                                                                                                                           F
                                                                                                             t
                                                        \mathbf{a}_1
                                               \mathbf{a}_0
                                                                                                                         34***
                                                                                                         5.938***
                           CFOit
                                              0.02
                                                        0.2
                                                                             9.4%
                                                                                           9.2%
                                                                  31%
                                           %5
                                                                                       ** %1
                                                                                          .%10
(%6)
                                            (2
                                                            (Adj-R<sup>2</sup>)
                                                              .%9.2
                                                                                   R_{it} = 0.02 + 0.56 \text{ CFO}_{it}.
                                                  (Adj-R^2)
                                                                               (Livnat and Zarowin, 1990; Pfeiffer
                  (Adj-R<sup>2</sup>)
                                                                               et al., 1998; Plenborg, 1999; West and worthington, 2000;
                                                                                                                           .Batrov et al., 2001)
                                                                                2004
                                                                                                  .(2005
                                                                                                                        2005
                                                                               (Adj-R<sup>2</sup>)
                                                                                                                        (Adj-R<sup>2</sup>)
     (6)
                                                                               (Adj-R<sup>2</sup>)
```

- 357 -

(CFO_{it}) (R_{it}) (FCFE_{it}) (FCFE_{it}) %9.2 %1 (R_{it}) .%1 .17.5 (F) %17.5 (Adj-R²) $R_{it} = 0.033 + 0.49CFO_{it} + 0.14FCFE_{it}.$ $R_{it} = 0.04 + 0.27 A E_{it} + 0.02 F C F E_{it}. \label{eq:reconstruction}$ (6) (Adj-R²) (FCFE_{it}) (t) (4) %16 (CFO_{it}) (FCFEit) %1 (sig) t = 2.6(5) %9.2 (FCFE_{it}) (CFO_{it}) %9.2 .(Penman and Yehuda, 2004) (FCFE_{it}) (7) . (Biddle, et al., 1995) **(6)**

	$\mathbf{a_0}$	\mathbf{a}_1	\mathbf{a}_2	R	\mathbb{R}^2	Adj-R ²	Т	F	sig
	0.04			43%	18%	17.5%	1.74***	15***	0.01
AEit		0.27			-		6.86***		0.01
FCFEit			0.02				2.6**		0.05
			%5			** %1		***	
						.%10)		*

(7)

	\mathbf{a}_0	\mathbf{a}_1	\mathbf{a}_2	R	\mathbb{R}^2	Adj-R ²	Т	F	sig
	0.033			31.2%	9.7%	9.2%	1.75***	17.5***	0.01
CFO _{it}		0.49					5.57***		0.01
FCFE _{it}			0.14				1.02		0.31

%5 ** %1 ***

.%10 *

...

```
.7
                                                                                                  .6
                                                                     )
                                                                                                                   .1
(Livnat and Zarowin, 1990; :
                                                                                    (
Pfeuffer et al., 1998; West and Worthington, 2000;
                                                                                            )
                               Batrov at al., 2001)
2005
               )
                                   .(2005
                                                     .8
                                                                    (Sloan, 1996)
                                                     .9
                                                              (Gentry et al., 2002; Penman,
                                                                                                           .2001)
                                                                                                                   .2
                                                                     )
                                                   .10
                                                              (Gentry, et
                                                   .11
                                                                              .al., 2002; Penman and Yehuda, 2004)
                                                                                                                   .3
                                                                                                          (FCFF)
                                :
                                                     .1
                                                                                                                   .4
                                                                              (FCFF)
                                                     .2
                                                                                 %6
                                                                                                             %1
                                                     .3
                                                                                  .%10
                                                                                                           %0.7
                                                                                                                   .5
                                                     .4
                                                                                                                   .6
                                                     .5
                                                              (Gentry, et al., 2002; Callen and Segal,
                                                                                 .2004; Penman and Yehuda, 2004)
```

- 359 -

1999

2003

3-42.

2001

. 62

2004 . 2002

Ali, A. 1994. The Incremental Information Content of
Earnings, Working Capital from Operations, and Cash
.2 31

Flows, *Journal of Accounting Research*, 32 (1): 61-74.

Batrov, E., Goldberg, S. and Kim, M. 2001. The Valuation-

Relevance of Earnings and Cash Flow; an International

Perspective, Journal of International Financial

Management and Accounting, 12: 2: 103-132.

Beneda, N.L. 2003. Estimating Free Cash Flows and .1 28

Valuing A Growth Company, Journal of Asset 2005

Management, 4-4: 247-257.

Biddle, G., Seow G. and Siegel, A. 1995. Relative Versus

Incremental Information Content, Contemporary

Accounting Research, 12 (1-1): 1-23.

Accounting Research, 12 (1-1): 1-23.

Board, J.L. and Day, J.F.S. 1989. Information Content of
Cash Flow Figures, Accounting and Business Research,

20: 3-11. 2 11

Callen, J. and Segal, D. 2004. Do Accruals Drive Firm-level

Stock Returns? A Variance Decomposition Analysis, 2005

Journal of Accounting Research, 42 (3): 527-560.

Chang, C. and Young, S. 2003. The Incremental Information

Content of Earnings and Cash Flow From Operations

Affected by Their Extremity, *Journal of Business*2003

Finance and Accounting, 30(1) and (2), 73-116.

Christensen, J. and Demski, J. 2003, Accounting Theory; an

Information Content Perspective, McGraw-Hill,

Damodaran, A. 1997. Corporate Finance Theory and

Practice, Second Edition, John Wiley and Sons, Inc.

Dechow, P. 1994. Accounting Earnings and Cash Flows as .2 30

Dechow, P. 1994. Accounting Earnings and Cash Flows as

Measures of Firm Performance the Role Accounting

Accruals, Journal of Accounting and Economics, 18(1)

. . .

- papers.ssrn.com/sol3/RefUsedIn.cfm?abid.
- Pfeiffer, R.J., Lo, M.H. and Rees, L. 1998. Additional Evidence on the Incremental Information Content of Cash Flow and Accruals: the Impact of Errors in Measuring Market Expectations, *The Accounting Review*, 73 (3) 373-385.
- Plenberg, T. 1999. An Examination of the Information Content of Danish Earnings and Cash Flows, *Accounting* and business Research, 30 (1):43-55.
- Revsine, L., Collins, D. and Johnson, W.B. 1997. Financial and Reporting Analysis, Prentice Hill, New Jersey.
- Richardson, S. 2002. Stock Repurchases: A Test of Free Cash Flow Hypothesis. University of Pennsylvania, Working Paper, Available: cba.uri.edu/Faculty/Higgins/Homepages/.../Blouin.pdf.
- Shamia, A. and Talafha, H. 1990. Amman Financial Stability, Effectiveness and Efficiency: an Economic Analysis, Abhath Al-Yarmouk, 6: 47-71.
- Sloan, R. 1996. Using Earnings and Free Cash Flow to Evaluate Corporate Performance, *Journal of Applied Corporate Finance*, 9 (1): 70-78.
- Vogt, S.C. and Vu, J.D. 2000. Free Cash Flow and Long-Run Firm Value, *Journal of Management Issues*, 12 (2) 1-20.
- West, T. and A. Worthington, 2000, The Information Content of Economic Value – Added: A Comparative Analysis with Earnings, Cash Flow and Residual Income, Working Paper, Griffith University, Australia. Available:
 - www.agsm.edu.au/eajm/0412/pdf/worthington_etal.pdf.
- White, G., Sondi, A. and Fried, D. 1997. The Analysis and Use of Financial Statements, Second Edition, John Weliy and Sons Inc.
- Wilson, P. 1986. The Relative Information Content of Accruals and Cash Flows: Combined Evidence at the Earnings Announcement and Annual report Release Date, *Journal of Accounting Research*, 24: 165-200.
- Young, S.D. and O'Byrne, S.F. 2001, EVA and Value Based Management a Practical Guide to Implementation, McGraw-Hill, New York.

- Francis, J., Olsson, P. and Oswald, D. 2000. Comparing the Accuracy and Explainability of Dividends, Free Cash Flow, and Abnormal Earnings Equity Value Estimates, *Journal of Accounting Research*, 38 (1) 45-69.
- Francis, J., Schipper, K. and Vincent, L. 2003. The Relative and Incremental Explanatory Power of Earnings and Alternative (to Earnings) Performance Measures for Returns, *Contemporary Accounting Research*, 20 (1): 121-164.
- Gentry, J., Whitford, D., Sougiannis, T. and Shigeo, A. 2002. Do Accounting Earnings or Free Cash Flows Provide a Better Estimate of Capital Gain Rates of Return on Stocks, Working Paper. vailable:www.business.uiuc.edu/Working_Papers.
- Hackel, K. and Livnat, J. 1996. Cash Flow and Security Analysis, Irwin Professional Publishing, Chicago, USA.
- Hackel, K., Livnat, J. and Rai, A. 1994. The Free Cash Flow / Small-Cap Anomaly, *Financial Analysts Journal*, 33-42.
- Jensen, M. 1986. Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers, *American Economic Review*, 76 (2): 323-39.
- Kothari, S.P. 2001. Capital Markets Research in Accounting, Journal of Accounting and Economics, 31 (3): 105-127.
- Livnat, J. and Zarowin, P. 1990. The Incremental Information Content of Cash-flow Components, *Journal of Accounting and Economics*, 13: 25-46.
- Meckling, W. 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics*, 3 (2): 305-360.
- Penman, S. 2004. Financial Statement Analysis and Security Valuation, Second Edition, McGraw-Hill.
- Penman, S. 2001. On Comparing Cash Flow and Accrual Accounting Models for Use in Equity Valuation, Working Paper, Columbia University, New York, Available:
 - caaa.metapress.com/index/DT0RJNEGQL607CBP.pdf.
- Penman, S. and yehuda, N. 2004. The Pricing of Earnings and Cash Flows and Affirmation of Accrual Accounting, Working Paper, University of Columbia, New York., Available:

Information Content for Free Cash Flow

Abdel Razzaq H. Salem and Husein A. Khasharmeh*

ABSTRACT

This Study aims at testing the information content of free cash flow. The main objectives of this study can be summarized as following:

- 1- Testing information content of both free cash flow for equity and firm.
- 2- Testing relative and incremental information content of free cash flow for equity compared with accounting earnings and net cash flow from operations.
- 3- Testing relative and incremental information content of free cash flow for firm, compared with accounting earnings and net cash flow from operations.

The study sample consisted of (329) observations firm/year, for 58 Jordanian industrial corporations listed in Amman Bourse, over the period from 1998 to 2003. The study utilizes simple and multiple regressions models to test its hypothesis.

The study concluded that free cash flow has information content, and the information content of both accounting earnings and net cash flow from operations are superior to free cash flow's information content. Finally, it found that free cash flow for equity has incremental information content beyond accounting earnings, but does not have incremental information content beyond net cash flow from operations.

Based on these results, the study recommended that investors, financial analysts and managers should adopt a set of different measures (cash and accrual-based measures) to evaluate company performance, as well as pay attention to free cash flow for equity. The study also suggested that it would be beneficial to Jordanian industrial corporations to disclose free cash flow for equity.

Keywords: Free Cash Flow, Information Content, Relative and Incremental Information Content.

^{*} Department of Accounting, Faculty of Economy and Political Sciences, Al-Fateh University, Tripoli, Libya; and Department of Accounting, Al-Bahrain University, Al-Bahrain. Received on 7/9/2005 and Accepted for Publication on 29/11/2006.