Business School

An examination of the impact of Integrated Reporting on Early Moving Firms

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Agenda

1. Introduction
2. Literature review:
   a. Background to <IR> and the IIRC's Pilot Programme
   b. Voluntary Disclosure Literature
   c. Capital Market Effects of Non-financial Disclosures
3. Research design
4. Results
5. Limitations

At a glance – What we do in this study?

Setting: Early Moving <IR> Firms (pilot and self declared)

RQ: Does the capital market reward early moving <IR> firms?

Hypothesis:

- Value relevance of level of integrativeness for early moving firms (EM) is higher that that of non-early moving firms (NEM)

- And value relevance of level of integrativeness will increase over time for EM

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Motivation:

- <IR>'s focus on providers of financial capital, especially long-term investors
- Costs and benefits of participation in the programme
- Is there alignment between the information needs of investors and other stakeholders?
- Emerging alternative framework for corporate reporting that will address shortcomings of financial reporting

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Contribution and Implications

Contribution
– Cheng et al.'s (2013) call for capital market studies on <IR>

– Build on existing literature on voluntary disclosure, and literature on capital market effects of non-financial disclosures

Implications
– Inform IIRC in its continuation of development of <IR>

– Inform early moving firms and businesses considering adoption of <IR>

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Background to <IR> and the IIRC's Pilot Programme

<IR> is: the integration of financial and non-financial information in a report that conveys information about an organisation's value creation processes over short-, medium-, and long-term through its use of six capitals
– Six capitals: Financial, manufactured, social and relationship, natural, intellectual, human capitals

Why <IR> is needed: Shortcomings in current reporting models

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Background to <IR> and the IIRC's Pilot Programme (continued)

- Networks of organisations that have aided the development of principles, content, and practical application of <IR>
- September 2011 to September 2014 (Three years)
- Businesses are in different stages of <IR> adoption
- Integrated Thinking

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Background to <IR> and the IIRC's Pilot Programme (continued)

Current Literature

- New phenomenon in practice and academia
- Cheng et al. (2013): Identify areas for research
- Lodhia (2014), Humphrey et al. (2014), Serafeim (2014), Zhou (2014) Mio and Fasan (2013)
- Jensen and Berg (2012) Incentives towards traditional sustainability reporting vs <IR>

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Voluntary Disclosures

Studies are based on the existence of an information gap between management and investors

- Voluntary disclosure as a communication tool for private information
- Benefits for firm to disclose (Healy & Palepu, 2001)

Motivation for voluntary disclosures

- Economics-based: Capital markets transaction hypothesis, management talent, signalling hypothesis
- Stakeholder-based: Stakeholder theory, legitimacy theory, institutional theory

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The Capital Market Effects of Non-financial Disclosures

Past studies' findings

- Relationship between social investments and economic performance could be curvilinear
- Incongruence still exists in findings
- Growing interest in non-financial information
- Combination of financial and non-financial information

Cost of capital effects

- Direct and indirect effects

Information intermediary effects

- Superior information set available

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Why study <IR>?

RQ1: Does the capital market reward early moving <IR> firms

RQ2: Is there an improvement in the market performance of early moving <IR> firms in the long run?

IIRC's value proposition for <IR>

- Internal and external drivers of <IR> (Adams et al. 2011)
- Anecdotal evidence

Investor focus of <IR>

- Clearer information: Information asymmetries, transaction costs, liquidity
- Better investment decisions and returns

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Research Design

Data:

- List of early moving firms (IIRC pilot and GRI self-declared)
- Firm-data – Datastream
- Self-developed <IR> Score (IRSCR) – Asset4 ESG Database

Research design:

- Matched firm sample: size, return, industry, country using PSM
- Control firms part of Asset4 ESG database

Additional tests:

- Early-movers versus late-movers
- Country (i.e. impact of South African firms) and industry

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MODEL

$$MVE_{i,t} = BVE_{i,t} + \alpha_1 NETY_{i,t} + \alpha_2 EARMOV_{i,t} + \alpha_4 PPENETR_{i,t} + \alpha_5 INTBOOK_{i,t} + \varepsilon_{i,t}$$

where:

$NETY_{i,t}$	= firm's net income at time t
$EARMOV_{i,t}$	= dummy: 1 if firm is an early-moving firm at time t, 0 otherwise
$PPENETR_{i,t}$	= proxy for firm's manufactured capital at time t
$INTBOOK_{i,t}$	= proxy for a firm's intellectual capital at time t

Other variables are as defined above.

Further, IRAGGR and an interaction term are added to Model (1) to produce Model (2):

$$(2) \quad MVE_{i,t} = BVE_{i,t} + \alpha_1 NETY_{i,t} + \alpha_2 EARMOV_{i,t} + \alpha_4 PPENETR_{i,t} + \alpha_5 INTBOOK_{i,t}$$
$$+ \alpha_6 IRAGGR_{i,t} + \alpha_7 EARMOV \; x \; IRAGGR_{i,t} + \varepsilon_{i,t}$$

where:

$IRAGGR_{i,t}$	= aggregate of a firm's values for its capital proxies and IRSCR at time t

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MODEL

(3):

$$(3) \quad MVE_{i,t} = BVE_{i,t} + \alpha_1 AE_{i,t} + \alpha_2 EARMOV_{i,t} + \alpha_4 PPENETR_{i,t} + \alpha_5 INTBOOK_{i,t}$$
$$+ \alpha_6 FINSCR_{i,t} + \alpha_7 SOCSCR_{i,t} + \alpha_8 HUMSCR_{i,t} + \alpha_9 NATSCR_{i,t}$$
$$+ \alpha_{10} IRSCR_{i,t} + \alpha_9 EARMOV \; x \; IRSCR_{i,t} + \varepsilon_{i,t}$$

where:

$FINSCR_{i,t}$	= proxy for a firm's financial capital at time t
$SOCSCR_{i,t}$	= proxy for a firm's social capital at time t
$HUMSCR_{i,t}$	= proxy for a firm's human capital at time t
$NATSCR_{i,t}$	= proxy for a firm's natural capital at time t
$IRSCR_{i,t}$	= a firm's score for adherence to IR principles at time t

Other variables are as defined above.

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Table 1: Sample Distribution

	Purely Pilot Firms	Purely Self-declared Firms	Both Pilot and Self-declared Firms	Total unique firms	Firm-year Observations
Panel A: Sample Selection					
Total firms available	75	540	29	644	3041
Less: Non-listed firms	-37	0*	0	-37	-111
Less: Firms with missing observations	-10	-240	0	-250	-1970
Total	28	300	29	357	960**

*The initial pool of self-declared firms are selected from the GRI Reports List (2014) and must meet two criteria: (1) They are publicly listed firms, and (2) They have self-declared that their reports are integrated.

**The number of firm-year observations remaining is not a perfect product of the number of firms multiplied by the number of years covered by the study given the different years of IR adoption for unique firms. Furthermore, the Asset4 ESG database has incomplete observations for the firms it covers in 2013.

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Comparison of IRSCR between EM and NEM

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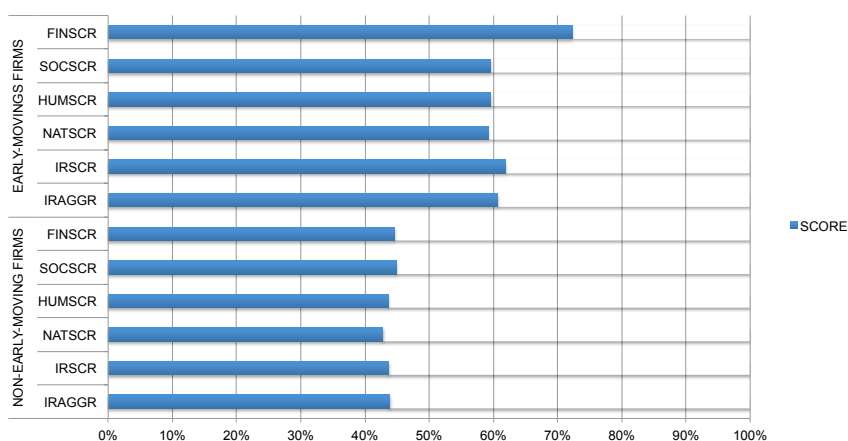
Results

Table 5: OLS Regression (Dependent Variable = MVE) – Test for Hypothesis One

Model		1				2				3		
N = 1920	Beta	t	Sig.		Beta	t	Sig.		Beta	t	Sig.	
(Constant)		3.744	0.000	***		-3.920	0.000	***		-4.186	0.000	***
BV	0.448	28.156	0.000	***	0.412	25.377	0.000	***	0.410	25.080	0.000	***
NETY	0.490	30.893	0.000	***	0.486	31.114	0.000	***	0.490	30.976	0.000	***
EARMOV	0.058	5.645	0.000	***	-0.164	-2.769	0.006	**	-0.139	-2.571	0.010	**
PPENETR	-0.003	-0.346	0.729		0.001	0.099	0.921		0.000	0.022	0.983	
INTBOOK	0.026	2.590	0.010	**	0.027	2.690	0.007	**	0.027	2.691	0.007	**
IRAGGR					0.089	4.995	0.000	***				
EARMOV X IRAGGR					0.175	2.661	0.008	**				
FINSCR									-0.013	-0.827	0.409	
SOCSCR									0.033	1.360	0.174	
HUMSCR									0.013	0.631	0.528	
NATSCR									0.051	2.224	0.026	*
IRSCR									0.013	0.416	0.677	
EARMOV X IRSCR									0.148	2.454	0.014	*
Adj. R2		0.810				0.817				0.817		

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Results – H2

Table 6: OLS Regression (Dependent Variable = MVE) – Test for Hypothesis Two

Panel A: Results for Model (1)												
Year		2011				2012				2013		
N = 190	Beta	t	Sig.		Beta	t	Sig.		Beta	t	Sig.	
(Constant)		0.987	0.325			1.417	0.158			1.690	0.093	*
BV	0.229	4.136	0.000	***	0.283	4.862	0.000	***	0.227	4.554	0.000	***
NETY	0.711	12.971	0.000	***	0.628	11.075	0.000	***	0.728	14.677	0.000	***
EARMOV	0.040	1.399	0.163		0.096	3.068	0.002	**	0.062	2.650	0.009	**
PPENETR	-0.002	-0.073	0.942		-0.007	-0.241	0.810		-0.007	-0.325	0.746	
INTBOOK	0.014	0.507	0.613		-0.001	-0.027	0.979		0.005	0.235	0.815	
Adj. R2		0.859				0.842				0.905		
F-stat		232.024	0.000	***		202.478	0.000	***		361.051	0.000	***

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	Panel B: Results for Model (2)								
Year		2011			2012			2013	
N = 190	Beta	t	Sig.	Beta	t	Sig.	Beta	t	Sig.
(Constant)		-0.553	0.581		-1.081	0.281		-1.103	0.271
BV	0.220	3.920	0.000	***	0.236	4.065	0.000	***	0.198	3.974	0.000	***
NETY	0.705	12.775	0.000	***	0.631	11.443	0.000	***	0.720	14.810	0.000	***
EARMOV	-0.028	-0.158	0.874		-0.332	-1.732	0.085	*	-0.214	-1.450	0.149
PPENETR	0.000	0.005	0.996		-0.001	-0.020	0.984		-0.001	-0.033	0.974
INTBOOK	0.015	0.540	0.590		0.003	0.091	0.928		0.008	0.345	0.731
IRAGGR	0.042	0.813	0.417		0.081	1.462	0.145		0.064	1.593	0.113
EARMOV X IRAGGR	0.044	0.225	0.822		0.391	1.800	0.074	*	0.245	1.523	0.130
Adj. R2		0.859			0.851			0.909	
F-stat		165.343	0.000	***	155.111	0.000	***	270.270	0.000	***

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Results

	Panel C: Results for Model (3)								
Year		2011			2012			2013	
N = 190	Beta	t	Sig.	Beta	t	Sig.	Beta	t	Sig.
(Constant)		-0.296	0.767		-1.107	0.270		-0.818	0.414	
BV	0.225	3.971	0.000	***	0.234	4.025	0.000	***	0.206	4.124	0.000	***
NETY	0.711	12.638	0.000	***	0.643	11.581	0.000	***	0.712	14.588	0.000	***
EARMOV	-0.027	-0.166	0.868		-0.372	-2.113	0.036	*	-0.273	-2.016	0.045	*
PPENETR	-0.004	-0.144	0.886		-0.002	-0.079	0.937		0.003	0.128	0.898	
INTBOOK	0.014	0.487	0.627		-0.003	-0.120	0.904		0.005	0.243	0.808	
FINSCR	-0.028	-0.644	0.521		-0.045	-0.984	0.327		0.013	0.347	0.729	
SOCSCR	-0.073	-1.004	0.317		0.029	0.385	0.701		0.017	0.286	0.775	
HUMSCR	0.067	1.049	0.295		0.018	0.289	0.773		0.045	0.957	0.340	
NATSCR	-0.041	-0.703	0.483		-0.095	-1.312	0.191		-0.057	-1.069	0.287	
IRSCR	0.107	1.215	0.226		0.150	1.451	0.149		0.043	0.574	0.567	
EARMOV X IRSCR	0.041	0.224	0.823		0.438	2.192	0.030	*	0.310	2.092	0.038	*
Adj. R2		0.859			0.853			0.909	
F-stat		105.512	0.000	***	100.368	0.000	***	172.806	0.000	***

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Summary of Results

Size, ROA and individual proxies of capital are significant determinants for likelihood to be an early moving <IR> firm

Level of integrativeness is value relevant for early moving firms and this increases over time.

Robust after controlling for countries with sustainability disclosure regime

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Limitations

– Perceived credibility or seriousness of participation
– Limited timeframe for analysis
– Other means to control for endogeneity

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