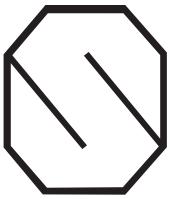


Corporate Social and Financial Performance: A Meta-analysis

Marc Orlitzky, Frank L. Schmidt, Sara L. Rynes

Abstract

Most theorizing on the relationship between corporate social/environmental performance (CSP) and corporate financial performance (CFP) assumes that the current evidence is too fractured or too variable to draw any generalizable conclusions. With this integrative, quantitative study, we intend to show that the mainstream claim that we have little generalizable knowledge about CSP and CFP is built on shaky grounds. Providing a methodologically more rigorous review than previous efforts, we conduct a meta-analysis of 52 studies (which represent the population of prior quantitative inquiry) yielding a total sample size of 33,878 observations. The meta-analytic findings suggest that corporate virtue in the form of social responsibility and, to a lesser extent, environmental responsibility is likely to pay off, although the operationalizations of CSP and CFP also moderate the positive association. For example, CSP appears to be more highly correlated with accounting-based measures of CFP than with market-based indicators, and CSP reputation indices are more highly correlated with CFP than are other indicators of CSP. This meta-analysis establishes a greater degree of certainty with respect to the CSP–CFP relationship than is currently assumed to exist by many business scholars.

Keywords: social responsibility, business ethics, stakeholder theory, reputation, environmental management, correlation analysis

'Can business meet new social, environmental, and financial expectations and still win?' (Business Week 1999)

Marc Orlitzky
UNSW and University of Sydney, Australia

Frank L. Schmidt
University of Iowa, USA

Sara L. Rynes
University of Iowa, USA

Introduction

The performance of business organizations is affected by their strategies and operations in market and non-market environments (Baron 2000). The increasing power of activist groups and the media in pluralist western societies can be expected to make organizations' non-market strategies even more important. One construct that might capture a major element of these non-market strategies is corporate social performance (CSP). CSP can be defined as 'a business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationships' (Wood 1991a: 693).

Organization Studies
24(3): 403–441

The impression that 'in the aggregate, results are inconclusive' regarding any theoretical conclusions about the relationship between CSP and corporate financial performance (CFP) has persisted until today (Jones and Wicks 1999: 212; cf. also Donaldson 1999; McWilliams and Siegel 2001; Roman et al. 1999). Ullmann (1985) and Wood and Jones (1995) argued that during the past three decades of empirical research on this relationship, researchers have engaged in a futile search for stable causal patterns. A number of narrative reviews and theories (for example, Aupperle et al. 1985; Griffin and Mahon 1997; Husted 2000; McWilliams and Siegel 2001; Pava and Krausz 1995; Ullmann 1985; Wartick and Cochran 1985; Wood 1991a, 1991b; Wood and Jones 1995) have proposed conceptual explanations for the existence (or lack thereof) of a causal relationship between CSP and CFP, but failed to provide clear answers. Previous reviews of this area have suggested that such factors as stakeholder mismatching (Wood and Jones 1995), the general neglect of contingency factors (for example, Ullmann 1985), and measurement errors (for example, Waddock and Graves 1997) may explain inconsistent findings. Other authors, failing to see important differences between theory and operational context, are even more pessimistic and call for a moratorium of CSP–CFP research (Margolis and Walsh 2001; Rowley and Berman 2000). Before we embark on a costly search for contingencies or abandon a line of inquiry altogether, a theoretically and empirically meaningful integration of this area might be useful. In this article, we argue that this line of inquiry contains a number of theoretical conclusions that have hitherto been overlooked or ignored by many organizational scholars.

This article presents a meta-analytic review of primary quantitative studies of the CSP–CFP relationship. Meta-analysis has proven to be a useful technique in many substantive areas where multiple individual studies have yielded inconclusive or conflicting results (for example, Damanpour 1991; Datta et al. 1992; Gooding and Wagner 1985; Schwenk 1989; see also Hedges 1987; Hunt 1997; Rosenthal and DiMatteo 2001; and Schmidt 1992 for broader reviews of meta-analysis). By statistically aggregating results across individual studies and correcting for statistical artefacts such as sampling error and measurement error, psychometric meta-analysis allows for much greater precision than other forms of research reviews. Ironically, those researchers that question the meaningfulness of the CSP–CFP research stream the most (Griffin and Mahon 1997; Margolis and Walsh 2001) have integrated the empirical evidence with the so-called 'vote-counting' technique, which, for a variety of reasons, has been shown to be invalid by many statistical experts (Hedges and Olkin 1980; Hunter and Schmidt 1990; Rosenthal 1995; Schmidt 1992). When, in 'vote counting', studies are simply coded as showing significantly positive, negative, or statistically non-significant results, conclusions are likely to be false (Hedges and Olkin 1980; Hunter and Schmidt 1990). In contrast, psychometric meta-analysis quantifies the impact of theoretical and methodological deficiencies in a given line of inquiry and is, therefore, at present, the most sophisticated research-integration technique.

The specific objectives of this meta-analysis are to: (1) provide a statistical integration of the accumulated research on the relationship between CSP and

CFP; (2) assess the relative predictive validity of instrumental stakeholder theory in the context of the CSP–CFP relationship; and (3) examine several moderators, such as operationalization of CSP and CFP (that is, measurement strategies) and timing of CSP and CFP measurement. In so doing, it builds on earlier research by: (a) including market (stock) return measures in addition to accounting returns; (b) including CSP measures other than social-responsibility audits performed by Kinder, Lydenberg, Domini & Co., Inc.; (c) responding to Waddock and Graves' (1997: 315) call for research on the temporal consistency of results, independent of the time lag chosen between CSP and CFP measures; and (d) integrating empirical results across diverse study contexts and enabling us to look for theoretical moderators and statistical artefacts that might explain the highly variable results across previous studies.

Theory and Hypotheses

Overall CSP–CFP Relationship

Instrumental stakeholder theory (for example, Clarkson 1995; Cornell and Shapiro 1987; Donaldson and Preston 1995; Freeman 1984; Mitchell et al. 1997 (the classification of these studies as exemplifying 'instrumental stakeholder theory' was made *ex post*)) suggests a positive relationship between CSP and CFP. According to this theory, the satisfaction of various stakeholder groups is instrumental for organizational financial performance (Donaldson and Preston 1995; Jones 1995). Stakeholder-agency theory argues that the implicit and explicit negotiation and contracting processes entailed by reciprocal, bilateral stakeholder–management relationships serve as monitoring and enforcement mechanisms that prevent managers from diverting attention from broad organizational financial goals (Hill and Jones 1992; Jones 1995). Furthermore, by addressing and balancing the claims of multiple stakeholders (Freeman and Evan 1990), managers can increase the efficiency of their organization's adaptation to external demands.

Additionally, according to a firm-as-contract analysis (Freeman and Evan 1990), high corporate performance results not only from the separate satisfaction of bilateral relationships (Hill and Jones 1992), but also from the simultaneous coordination and prioritization of multilateral stakeholder interests. These strategic and tactical steps may be necessary to reduce the likelihood of the organization's becoming stuck in a high-density network. High network density can reduce CFP in a number of ways (Rowley 1997). For example, in a high-density network, firms may become stuck in the role of compromiser or subordinate, depending on the degree of the firm's network centrality (Rowley 1997). Either of these roles may lead to further consumption of valuable firm resources such as time, labour, and capital. Conversely, high CSP bolsters a company's competitive advantage by weighing and addressing the claims of various constituents in a fair, rational manner. This perspective, which is primarily derived from instrumental

stakeholder theory (Jones 1995), has also been identified as the 'good management theory' (Waddock and Graves 1997). Therefore, we predict that:

H1: Corporate social performance and financial performance are generally positively related across a wide variety of industry and study contexts.

Temporal Sequence

Like the 'good management theory', slack resources theory also proposes a positive association between CSP and CFP. However, it proposes a different temporal ordering — namely, that prior CFP is directly associated with subsequent CSP. Prior high levels of CFP may provide the slack resources necessary to engage in corporate social responsibility and responsiveness (Ullmann 1985; Waddock and Graves 1997). Because CSP often represents an area of relatively high managerial discretion, the initiation or cancellation of voluntary social and environmental policies may, to a large extent, depend on the availability of excess funds (McGuire et al. 1988).

To distinguish between slack resources theory and the good management theory, the meta-analytic data set will be examined for three sets of temporal associations: (a) prior CSP related to subsequent CFP; (b) prior CFP related to subsequent CSP; and (c) contemporaneous (cross-sectional) associations. If effect sizes are highly similar across all three meta-analytic subgroups, Waddock and Graves's (1997) argument about a virtuous cycle between CSP and CFP would be supported irrespective of study context, sampling error, and measurement error. Based on prior theory and empirical findings (McGuire et al. 1990; Waddock and Graves 1997), we believe that both instrumental stakeholder theory and slack resources descriptions are accurate, such that the two constructs are related to each other reciprocally.

H2: There is bidirectional causality between corporate social performance and financial performance.

Mediating Effects

CSP may be an organizational resource that provides internal or external benefits, or both. Internally, investments in CSP may help firms develop new competencies, resources, and capabilities which are manifested in a firm's culture, technology, structure, and human resources (Barney 1991; Russo and Fouts 1997; Wernerfelt 1984). Especially when CSP is pre-emptive (Hart 1995) and a firm's environment is dynamic or complex, CSP may help build managerial competencies because preventive efforts necessitate significant employee involvement, organization-wide coordination, and a forward-thinking managerial style (Shrivastava 1995). Thus, CSP can help management develop better scanning skills, processes, and information systems, which increase the organization's preparedness for external changes, turbulence, and crises (for example, Russo and Fouts 1997). These competencies,

which are acquired internally through the CSP process, would then lead to more efficient utilization of resources (Majumdar and Marcus 2001). According to the 'internal resources/learning' perspective, whether CSP behaviours and outcomes are also disclosed to outside constituents is largely irrelevant to the development of internal capabilities and organizational efficiency.

In addition, however, CSP may have external effects on organizational reputation. According to the reputation perspective, an organization's communication with external parties about its level of CSP may help build a positive image with customers, investors, bankers, and suppliers (Fombrun and Shanley 1990). Firms high in CSP may use corporate social responsibility disclosures as one of the informational signals upon which stakeholders base their assessments of corporate reputation under conditions of incomplete information (Fombrun and Shanley 1990). Furthermore, firms with high CSP reputation ratings may improve relations with bankers and investors and thus facilitate their access to capital (Spicer 1978). They may also attract better employees (Greening and Turban 2000; Turban and Greening 1997) or increase current employees' goodwill, which in turn may improve financial outcomes (Davis 1973; McGuire et al. 1988; Waddock and Graves 1997). In sum, the reputation perspective postulates reputational effects as mediators of the CSP–CFP linkage, while the internal-resources perspective proposes managerial competencies and learning as the intervening generative mechanism between a positive CSP–CFP association. Therefore, we propose that:

H3: CSP is positively correlated with CFP because (a) CSP increases managerial competencies, contributes to organizational knowledge about the firm's market, social, political, technological, and other environments, and thus enhances organizational efficiency, and (b) CSP helps the firm build a positive reputation and goodwill with its external stakeholders.

Measurement Strategy: An Important Moderator Variable

Because both CSP and CFP are such broad meta-constructs, a given study's operationalization of each construct may act as an important moderator. To test this hypothesis, the entire meta-analytic set is broken down into different CFP and CSP subsets employing different measurement strategies. This breakdown can establish whether correlations between different CSP and CFP measures are similar across subgroups, or whether different operationalizations lead to systematically different effect sizes across studies. The following section gives an overview of how CFP and CSP have been measured in the past.

The three broad subdivisions of CFP consist of market-based (investor returns), accounting-based (accounting returns), and perceptual (survey) measures. First, market-based measures of CFP, such as price per share or share price appreciation, reflect the notion that shareholders are a primary stakeholder group whose satisfaction determines the company's fate (Cochran

and Wood 1984). The bidding and asking processes of stock-market participants, who rely on their perceptions of past, current, and future stock returns and risk, determine a firm's stock price and thus market value. Alternatively, accounting-based indicators, such as the firm's return on assets (ROA), return on equity (ROE), or earnings per share (EPS), capture a firm's internal efficiency in some way (Cochran and Wood 1984). Accounting returns are subject to managers' discretionary allocations of funds to different projects and policy choices, and thus reflect internal decision-making capabilities and managerial performance rather than external market responses to organizational (non-market) actions. Lastly, perceptual measures of CFP ask survey respondents to provide subjective estimates of, for instance, the firm's 'soundness of financial position', 'wise use of corporate assets', or 'financial goal achievement relative to competitors' (Conine and Madden 1987; Reimann 1975; Wartick 1988).

The construct of CSP is associated with the following four broad measurement strategies: (a) CSP disclosures; (b) CSP reputation ratings; (c) social audits, CSP processes, and observable outcomes; and (d) managerial CSP principles and values (Post 1991). First, CSP disclosure measurement consists of content analysis of annual reports, letters to shareholders, 10Ks, and a number of other corporate disclosures to the public as surrogates of CSP. Content analysis is employed to compare units of text against particular CSP themes in order to draw inferences about the organization's underlying social performance (Wolfe 1991).

A second approach to measuring CSP is the use of reputational indices, such as Moskowitz's (1972, 1975) tripartite ratings ('outstanding', 'honourable mention', and 'worst' companies; for example, Cochran and Wood 1984; Sturdivant and Ginter 1977) or *Fortune* magazine ratings of a corporation's 'responsibility to the community and environment' (for example, Conine and Madden 1987; Fombrun and Shanley 1990; McGuire et al. 1988). Other researchers (Alexander and Buchholz 1978; Heinze 1976; Vance 1975) have developed their own reputational measures by surveying business professionals and business students. Reputation indices are based on the assumption that CSP reputations are good reflections of underlying CSP values and behaviours.

Social audits and concrete observable CSP processes and outcomes are the third broad measurement category of CSP. Social audits consist of a systematic third-party effort to assess a firm's 'objective' CSP behaviours, such as community service, environmental programmes, and corporate philanthropy. Objective data are the foundation for so-called 'behavioural' measures of CSP. However, behavioural measures based on social audits may still result in a ranking, such as the measure provided by the Council on Economic Priorities (CEP). Various studies have used the CEP social audit rankings of companies' pollution records (for example, Bragdon and Marlin 1972; Fogler and Nutt 1975; Spicer 1978; see also the overview of studies in Appendix A). Although this subset of studies differs from the other three subsets, it is still very broad. Therefore, this third group will be broken down further to examine the instrumental effectiveness of processes of social responsiveness.

The fourth measurement category of CSP assesses the values and principles inherent in a company's culture. Aupperle (1984) developed a forced-choice survey of corporate social orientations, drawing on Carroll's (1979) corporate social responsibility construct with its four dimensions of economic, legal, ethical, and discretionary responsibilities. The last three elements comprise the construct 'concern for society'. Volume 12 of *Research in Corporate Social Performance and Policy* (Post 1991: Part III, 265–401) reviews in greater depth the history and psychometric properties of the different CSP measures briefly delineated here (Aupperle 1991; Carroll 1991; Clarkson 1991; Gephardt 1991; Wokutch and McKinney 1991; Wolfe 1991; Wolfe and Aupperle 1991).

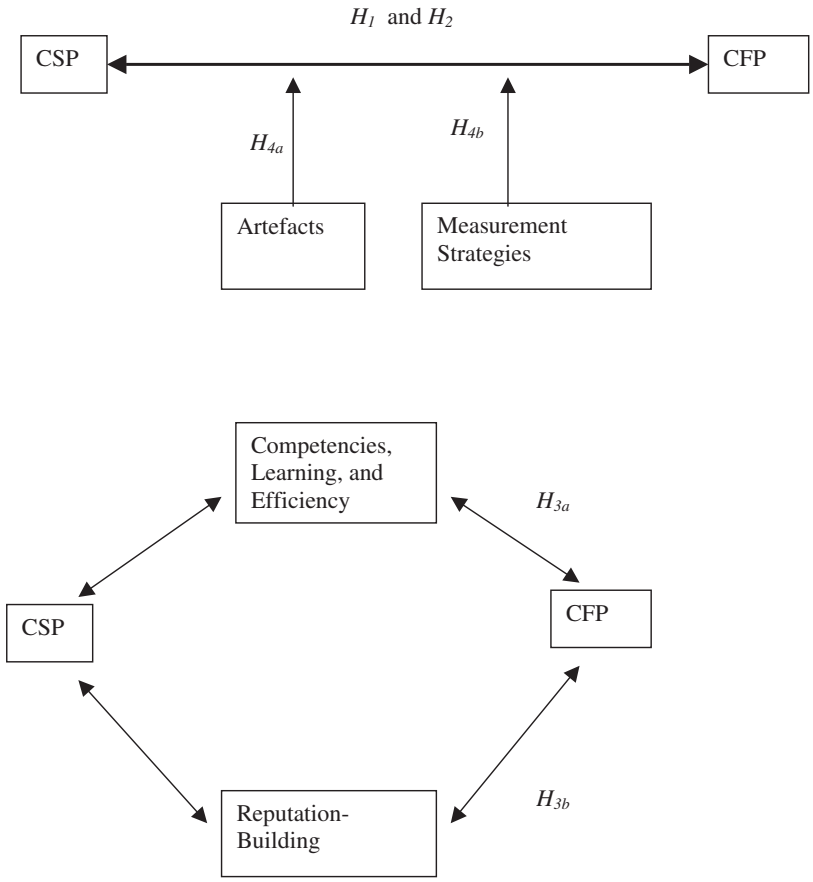
Differences in CSP–CFP statistical associations across these four measurement subsets may result from three sources. First, there might be 'real' (substantive) cross-study variation in correlations between CSP and CFP, as predicted by Wood and Jones's (1995) mismatching thesis. Wood and Jones (1995) argued that effects would vary depending on expectations and evaluations of CSP, which differ from one stakeholder group to another. No positive correlations would be expected between measures that cannot be linked theoretically, such as CSP disclosures and accounting-based efficiency measures of CFP. For example, Wood and Jones's (1995) review suggested that the match between market measures and market-oriented stakeholders (for example, customers) would produce significant positive results, while the correlation between market measures and charitable contributions, for instance, would not.

Alternatively, differences in correlations across variable measurement subsets may simply be a function of statistical artefacts. For example, if one measurement subgroup were found to contain many studies with very small sample sizes, this subgroup would show a relatively large random sampling error. Thus, differences in *sampling error* across measurement subgroups may explain CSP/CFP correlational differences in primary studies. In addition, *measurement error* of CFP and CSP (that is, unreliability) might act as another artefactual source of cross-study variability in correlations. If, for example, CSP disclosure measures were plagued by comparatively low psychometric quality (for example, Abbott and Monsen 1979; Ingram and Frazier 1980; Wiseman 1982), observed correlations between CSP disclosures and CFP would be systematically lower than the correlations between CFP and other, more reliable measures of CSP. Therefore, this meta-analysis hierarchically breaks down the overall data set in order to compare the relative magnitudes of correlations arising from different CSP and CFP measurement subcategories, and to test for these three possible sources of cross-study variation of correlations (substantive differences, sampling error, and measurement error). We hypothesize that:

H4a: A large proportion of cross-study variance is due to statistical or methodological artefacts (sampling error and measurement error).

H4b: Consistent with stakeholder mismatching, after accounting for statistical artefacts, there will still be differences in the statistical associations between different sub-dimensions of CFP and CSP (after correct matching).

Figure 1
Hypothesized
Relationships (H_j)



Note: CSP = corporate social performance; CFP = corporate financial performance.

Methods

Prior summaries of the CSP–CFP literature have relied mostly on narrative reviews (for example, Pava and Krausz 1995; Ullmann 1985) or the vote-counting method of aggregation (for example, Griffin and Mahon 1997; Margolis and Walsh 2001; Roman et al. 1999; Wood and Jones 1995). Narrative reviews are literature reviews that attempt to make sense of past findings verbally or conceptually. The vote-counting method refers to the cumulation of significance levels or, in the simplest case, to the tabulation of significant and non-significant findings (Hunter and Schmidt 1990; Light and Smith 1971). Both of these research integration techniques tend to draw false inferences because they do not correct for sampling and measurement error, two important study artefacts (Hedges and Olkin 1980; Hunter and Schmidt 1990). In fact, the statistical errors in the typical 'vote-counting' literature review tend to be more serious than in the average narrative review because the statistical power of the vote-counting procedure *decreases* with *increasing*

number of studies reviewed (Hedges and Olkin 1980; Hunter and Schmidt 1990). Although we have known for more than 20 years that vote counting is marred by a lack of validity, the technique is still widely used today (for example, Griffin and Mahon 1997; Margolis and Walsh 2001; Roman et al. 1999; Wood and Jones 1995).

In contrast, effect-size (r) meta-analysis is a rigorous approach to external validation, which calculates population parameter estimates (ρ) by correcting for the aforementioned artefacts. The effect of sampling error is important because sample sizes that are smaller than the population cause observed sample correlation statistics r to vary randomly from the population parameter, the true-score correlation ρ. In addition, as mentioned before, measurement error (that is, unreliability) systematically attenuates observed correlations (Nunnally and Bernstein 1994).

Search for Relevant Studies

Computer searches of ABI/Inform Global and PsycINFO were conducted, using the keyword search 'organizational effectiveness and corporate social performance'. Synonyms for the former, used in separate computer searches, were 'organizational performance', 'profitability', 'economic success', and 'financial performance'. 'Corporate social performance' as a keyword search term was alternately substituted with '(corporate) social responsibility', 'corporate environmental performance', 'responsiveness', and simply 'resp?'. ABI/Inform Global gives access to the full text and images of more than 1,200 US and international business and trade journal articles (1970–current), while PsycINFO indexes abstracts of journal articles and book chapters in psychology starting in 1974. To increase the scope of our search, cross-citations from previous narrative reviews (for example, Aldag and Bartol 1978; McGuire et al. 1988: 857–860; Preston 1978a; Waddock and Mahon 1991; Wood and Jones 1995) were explored as well.

Criteria for Relevance

The studies that were deemed relevant for the meta-analysis had the following characteristics. First, the studies quantitatively examined the relationship between CSP and CFP. The reported effect size did not have to be a Pearson's product-moment correlation r, but could also be a t-test statistic or effect size d (both t and d can be transformed to r; Hunter and Schmidt 1990). Second, the studies were concerned with at least one aspect of a firm's economic performance, as circumscribed by the definition of CFP. For the purpose of this study, CFP was defined as a company's financial viability, or the extent to which a company achieves its economic goals (Price and Mueller 1986; Venkatraman and Ramanujam 1986). Third, all retrieved studies were double-checked for conformance to Wood's (1991a) definition of CSP (see Introduction above). Wood's (1991a) now classic definition is used because it is one of the most influential, helpful, parsimonious, and yet comprehensive conceptualizations of CSP. If the particular variable could not be classified

as an example belonging to one of the nine subcategories of Wood's model, the study was excluded. In addition, unclear reporting of empirical results was also a reason for exclusion.

Studies of environmental management and CFP are included in the meta-analysis for several reasons. First, several studies, especially earlier ones, use environmental performance as a proxy for social responsibility. Second, stakeholder proxies, such as environmental interest groups and government agencies, may in fact give voice to, or claim a social 'stake' for, non-human nature (Starik 1995). Lastly, the business community tends to regard social responsibility as including both social and environmental performance (for example, Willums 1999). Still, the argument can be made that the literature on CSP differs from the one on corporate environmental performance in various aspects. To investigate differences between social and environmental performance, the entire set (k = number of effect sizes integrated = 388) is disaggregated into purely *social* performance measures only (that is, excluding all environmental performance measures; k = 249) and environmental measures only (k = 139).

Characteristics of Primary Studies

The most important study characteristics, such as author(s), date of study, study sample size N_i, observed r or transformed and/or partially corrected r (that is, corrected for dichotomization and unequal sample sizes in the two groups compared in a t-test), number of correlations per study, operationalization of CSP and CFP, and estimates of reliability are listed in Appendix A.

Reliability is traditionally defined as the ratio of true-score variance to observed-score variance (Traub 1994). Thus, classical measurement theory is concerned with the correspondence between observed scores and true scores. Some of the reliability coefficients used in this study are in the tradition of classical reliability theory, such as coefficient alpha. Sometimes, however, it becomes necessary to count not only variation due to item sampling, but also day-to-day variation in scores as measurement error. In classical theory, one can accomplish this task by using an alternate-forms coefficient of reliability. Generalizability theory is less restrictive in its assumptions than classical theory (Cronbach et al. 1972). The coefficient of generalizability reflects the degree to which observed scores (of CSP or CFP in this case) allow for generalization about a firm's behaviour in a defined universe of situations (Cronbach et al. 1972; Shavelson et al. 1989). Generalizability is estimated through 'alternate-forms' correlations between different CSP, and CFP, measures.

The present study estimates reliability by including coefficients of generalizability (76 percent), stability (4 percent), internal reliability (8 percent), and inter-rater reliability (12 percent). Both stability and generalizability coefficients are underestimates of reliability (Orlitzky 1998). Because of the predominance of coefficients of stability and generalizability, the meta-analysis provides conservative estimates (that is, lower-bound estimates) of the reliability of the CSP or CFP measurement instrument.

In addition to listing the reliabilities of both constructs, Appendix A shows the great variety of study contexts and operationalizations of both constructs. From the vantage point of generating cumulative knowledge, multiple operationism is an advantage because it helps determine whether a 'true' relationship exists in different industry contexts with different operationalizations of the two focal constructs (Cook and Campbell 1979; Cooper 1989; Webb et al. 1981). In past meta-analyses, integrated studies often contained broad meta-constructs as well, such as job or organizational performance, operationalized in many different ways (for example, Gooding and Wagner 1985; Ketchen et al. 1997; Roth et al. 1996; Wagner and Gooding 1987). During data collection, the inclusion criteria for relevance (see above) served as constant checks on the operationalizations' conformance to the broad conceptual definitions of CSP and CFP.

Empirically, the standard deviation of ρ serves as an indicator of cross-study heterogeneity. The percentage of cross-study variance explained by artefacts is another indicator of the degree of cross-study generalizability (Hunter and Schmidt 1990).

Statistical Conventions Used in the Meta-analysis

The meta-analysis uses Hunter and Schmidt's (1990) statistical aggregation techniques for cumulating correlations and correcting for various study artefacts in order to estimate the true score correlation (ρ) between CSP and CFP. Meta-analysis arrives at a mean true-score correlation by correcting observed correlations for sampling error (which can be written as $\sigma_e = (1-\rho^2)/\sqrt{(N-1)}$) and for measurement error. Since sampling error varies directly with sample size, all studies are weighted by sample size N_i before correcting for the average attenuation factor (Schmidt and Hunter 1977).

Because measurement error data points are not always available for individual studies (see Appendix A), study correlations cannot be corrected individually for measurement error. Instead, correlations are meta-analysed using artefact distributions (for more details on artefact-distribution meta-analysis, see Hunter and Schmidt 1990). The moderator analyses use Hunter and Schmidt's (1990) subgrouping algorithm, as described in the Results section below.

Non-independence in any meta-analytic data set can present certain problems. Therefore, sensitivity analyses were conducted by using two other aggregation techniques. In the first sensitivity analysis, we used only one independent correlation per study, that is, composite scores. Furthermore, a second sensitivity analysis tested the stability of our transformations of effect sizes (reported *t* or *d* statistics into *r*).

Results

Overall CSP–CFP Relationships

As shown in the first line of Table 1, the mean observed correlation (r_{obs}) for the total set of 388 correlations and a total sample size *N* of 33,878

Table 1. Overall Meta-Analytic Findings (Hypothesis 1)

Relationship between…	k [a]	Total Sample Size	Sample-Size Weighted Mean Observed r (r_{obs})	Observed Variance	% Variance Explained[b]	Mean 'True-Score' r (mean ρ)	Variance of ρ [$\sigma^2(\rho)$]	File Drawer Analysis[c]
1. CSP and CFP (entire meta-analytic set)	388	33,878	.1836	.0646	23.89	.3648	.1896	1,037
2. CSP and CFP without CSP reputation and CFP survey measures	252	20,662	.0776	.0296	43.94	.1543	.0641	139
3.a. CSP without corporate environmental performance and CFP	249	24,055	.2301	.0638	27.04	.4671	.1891	897
3.b. Corporate environmental performance and CFP	139	9,823	.0562	.0383	40.33	.1246	.1097	17

[a] k: number of correlation coefficients meta-analysed.
[b] refers to percentage of cross-study observed variance explained by three study artefacts: sampling error, measurement error in CSP, measurement error in CFP.
[c] Hunter and Schmidt's (1990) effect size file drawer analysis: number of missing studies averaging null findings needed to bring r_{obs} down to .05.

observations is .18, with an observed variance of .06. The study artefacts of sampling and measurement error in CSP and CFP explain 24 percent of the cross-study variance of r_{obs}. After correction for sampling and measurement errors, the true score (corrected) correlation (ρ) was .36, which is twice the size of the observed correlation, with a variance (.19), which is slightly more than three times the size of the observed variance. As shown in the second line of Table 1, the relationship remains positive even after we removed studies that may be affected by response bias (survey measures of CFP) and halo (CSP reputation indices; Brown and Perry 1994); the remaining meta-analytic set showed an average observed correlation of .08 and a true-score correlation of .15. Although this true-score correlation is smaller than in the larger set including CSP reputation and CFP survey measures, it is not trivial. Thus, the meta-analytic findings support hypothesis H1.

The sensitivity analyses tend to confirm this conclusion. The first sensitivity analysis, which uses only one effect size per study (thus, $k = 52$, $N = 4924$), showed a mean observed correlation of .21 and a corrected correlation of .42. The second sensitivity analysis, on 210 product-moment correlations (k) with a total sample size of 22,218 observations (N), also showed slightly higher estimates ($r_{obs} = .20, \rho = .41$) than the overall meta-analysis reported in Table 1. Thus, in both 'sensitivity' meta-analyses (not reported in the tables), the mean observed and corrected correlations were positive and of similar magnitude as the correlations in the entire meta-analytic set. If anything, the sensitivity analyses suggest that our meta-analytic estimates are actually conservative estimates of the relationships between CSP and CFP.

Corporate Social and Environmental Performance

Table 1 also shows analyses for two different conceptualizations of CSP. When the entire meta-analytic set was divided into two sets, that is, (a) those studies using a narrow definition of 'social' performance (thus excluding measures of environmental performance; $k = 249$, $N = 24{,}055$) and (b) studies of corporate environmental performance only ($k = 139$, $N = 9823$), the findings show that corporate environmental performance has a smaller relationship with CFP ($r_{obs} = .06, \rho = .12$) than do all other measures of CSP ($r_{obs} = .23, \rho = .47$), such as managerial principles and corporate reputations for minority hiring, for example. In the corporate environmental performance subset, the variances of observed and true-score correlations were also smaller than those in the 'pure' CSP subset. Furthermore, measurement error and sampling error explained more of the cross-study variance of r_{obs} in the corporate environmental performance subset than in the 'pure' CSP subset. Thus, the last two lines of Table 1 (entries 3.a and 3.b) demonstrate that the relatively lower correlation between corporate *environmental* performance and CFP is, in fact, much more consistent across industry and study contexts than the primary empirical studies would have us believe.

File Drawer Analysis

In the overall meta-analysis as in all subsequent meta-analyses, an effect size *file drawer analysis* was performed to address the possibility of availability

Table 2a. 'Good Management' Theory and Slack Resources Theory (Hypothesis 2, All measures of CSP, Incl. Environmental Performance)

Relationship between…	k [a]	Total Sample Size	Sample-Size Weighted Mean Observed r (r_{obs})	Observed Variance	% Variance Explained[b]	Mean 'True-score' r (mean ρ)	Variance of ρ [$\sigma^2(\rho)$]	File Drawer Analysis[c]
CSP and subsequent CFP	68	6,966	.1450	.0602	20.47	.2881	.1847	129
CSP and prior CFP	111	9,929	.1481	.0578	23.90	.2944	.1697	218
CSP and concurrent CFP (cross-sectional studies)	209	16,983	.2201	.0677	26.47	.4375	.1919	711

[a] k: number of correlation coefficients meta-analysed.
[b] refers to percentage of cross-study observed variance explained by three study artefacts: sampling error, measurement error in CSP, measurement error in CFP.
[c] Hunter and Schmidt's (1990) effect size file drawer analysis: number of missing studies averaging null findings needed to bring r_{obs} down to .05.

Table 2b. Hypothesis 2 'Pure' CSP Measures only

Relationship between…	k [a]	Total Sample Size	Sample-Size Weighted Mean Observed r (r_{obs})	Observed Variance	% Variance Explained[b]	Mean 'True-Score' r (mean ρ)	Variance of ρ [$\sigma^2(\rho)$]	File Drawer Analysis[c]
CSP and subsequent CFP	31	4,189	.2016	.0722	17.20	.4005	.2306	94
CSP and prior CFP	54	6,800	.2262	.0443	32.07	.4495	.1161	190
CSP and concurrent CFP (cross-sectional studies)	158	12,764	.2529	.0755	26.13	.5027	.2151	641

[a] k: number of correlation coefficients meta-analysed.
[b] refers to percentage of cross-study observed variance explained by three study artefacts: sampling error, measurement error in CSP, measurement error in CFP.
[c] Hunter and Schmidt's (1990) effect size file drawer analysis: number of missing studies averaging null findings needed to bring r_{obs} down to .05.

bias. Availability bias is one of the most common criticisms levelled against meta-analysis, in that critics of meta-analysis often suspect that published studies will report larger effect sizes than unpublished studies. File drawer analysis addresses this issue by computing the number of additional unlocated (that is, 'lost' or overlooked) studies needed to cause the correlation to decrease to a minimal critical level (r_{crit}), which is set at .05 in this study. Hunter and Schmidt (1990) present the underlying assumptions and techniques of file drawer analysis. For each correlation computed in Tables 1–4, the results of the file drawer analysis are presented in the last column. As shown in Table 1, a very large number of studies (1,037) would be needed to change the overall substantive conclusions of this meta-analysis (entry 1 in Table 1).

Temporal Sequence

Tables 2a and 2b show the results relevant to Hypothesis 2, which suggested a virtuous cycle between CSP and CFP. Consistent with that hypothesis, the primary studies supported the instrumental stakeholder and slack resources theories to about the same degree. Specifically, both the prior CFP and subsequent CFP subsets yielded observed correlations of .15, and corrected correlations of .29 (first two lines in Table 2a). Concurrent studies yielded observed and corrected correlations with CFP of .22 and .44, respectively (third line of Table 2a). Taken together, these findings suggest a virtuous cycle with quick cycle times or concurrent bidirectionality. However, the low percentages of observed cross-study variance explained by artefacts, ranging from 20 percent to 26 percent, and large true-score variances ranging from .17 to .19, indicate the presence of at least one moderator. As Table 2b shows, consistent with the overall analysis (Table 1, entries 3.a and 3.b), the results are stronger after corporate environmental measures were removed from CSP. Generally, though, the relationships reported in Table 2b confirm the conclusions of Table 2a.

Mediator Variables: Learning and Reputation

To investigate Hypothesis 3, studies were divided into two broad subsets: (a) studies that correlated both internal and external measures of CSP with only accounting CFP measures (that is, measures of *internal* resource utilization, such as ROA or ROE); and (b) studies which correlated only *externally visible* measures of CSP, such as CSP reputation or disclosures, with exclusively *external* (for example, market return or sales growth) measures of CFP. The reputational argument is further subdivided into studies correlating external indicators of CFP with: (a) reputation indices of CSP; (b) CSP disclosures in annual reports and letters to shareholders; and (c) other externally visible measures of CSP such as social audits and charitable contributions.

Based on the magnitude of the meta-analytic correlations, the meta-analysed studies support the reputation-effects viewpoint relatively more strongly than the internal viewpoint, as shown in Table 3 (compare first two

Table 3. Subset Meta-Analysis: Reputation Theory and Internal Skills Theory of CSP (Hypothesis 3)

Type of Relationship	k [a,d]	Total Sample Size	Sample-Size Weighted Mean Observed r (r_{obs})	Observed Variance	% Variance Explained[b]	Mean 'True-Score' r (mean ρ)	Variance of ρ [$\sigma^2(\rho)$]	File Drawer Analysis[c]
1. Efficiency, skills, learning, and/or competency	130	12,957	.1630	.0280	49.66	.3324	.0572	294
2. Reputation theory	177	14,274	.2484	.1024	19.59	.4942	.3185	702
2.a. Reputation indexes	65	6,858	.4197	.0992	24.77	.7593	.2386	481
2.a.1. Subsequent CFP	10	1,088	.3681	.1869	15.43	.7504	.6420	64
2.a.2. Prior CFP	9	1,074	.3558	.1053	25.58	.7254	.3182	55
2.a.3. Concurrent CFP	46	4,696	.4463	.0752	51.29	.9099	.1488	365
2.b. Disclosure measures	75	4,351	.0586	.0192	93.49	.1399	.0070	13
2.c. Other	37	3,065	.1356	.0978	14.75	.2698	.3226	63

[a] k: number of correlation coefficients meta-analysed.
[b] refers to percentage of cross-study observed variance explained by three study artefacts: sampling error, measurement error in CSP, measurement error in CFP.
[c] Hunter and Schmidt's (1990) effect size file drawer analysis: number of missing studies averaging null findings needed to bring r_{obs} down to .05.
[d] Correlations in subsets 1 and 2 do not add up to 388 because assignment to type of relationship was questionable in certain cases.

lines in Table 3, that is, entry 1 with entry 2). In addition, further hierarchical breakdown of the reputation view subset indicates that CSP disclosures appear to have a low reputational impact on CFP. This statistical conclusion is generalizable across study settings because a high proportion of variance (93 percent) is explained by study artefacts (entry 2.b in Table 3). Moreover, timing of measurement (temporal sequence) is not an important moderator within the 'reputation view' argument. As was the case in the overall meta-analysis, the correlations between CSP and subsequent CFP are almost identical to the ones found between CSP and prior CFP (ρ = .75 and .73, respectively; entries 2.a.1 and 2.a.2 in Table 3). Again, the correlations are highest when CSP and CFP were measured less than a year apart (ρ = .91, and 51 percent of cross-study variance explained by artefacts; entry 2.a.3).

Moderator Analysis

The analyses relevant to Hypothesis 3 already alluded to an important feature of Hunter and Schmidt's (1990) meta-analytic technique; namely, detection of cross-study moderators. Because this algorithm will be used extensively in the remaining meta-analyses, a brief explanation seems in order. Hunter and Schmidt's (1990) moderator analysis consists of two distinct methods. First, the '75% rule' can be applied, stating that if 75 percent or more of the observed variance of correlations across studies is due to artefacts, then probably all of it is artefactual variance (on the grounds that the remaining 25 percent is likely due to artefacts not corrected for). Thus, in cases where 75 percent or more of the variance is explained by artefacts, including sampling error variance, moderators are unlikely to have caused a real variation in observed correlations (r_{obs}). This first method is able to detect the existence of unsuspected moderators.

The second method, which can detect discontinuous, theoretically predicted moderators, compares mean observed and true-score correlations across study domain subsets of the original entire set of studies aggregated in the meta-analysis. If in these meta-analytic subgroups, a higher percentage of variance is accounted for by study artefacts relative to the entire meta-analytic set, moderators are said to exist.

Measurement Strategy as Moderator

To examine Hypotheses 4a and 4b, the entire data set of 388 correlations was broken down hierarchically to investigate the presence of moderator effects based on the operationalizations of CSP and CFP (see Table 4a). First, CFP and CSP operationalizations were disaggregated separately. Second, the four broad CSP operationalization subsets were broken down hierarchically into the two (or three, where available) CFP measurement categories. The lowest level in Table 4a is the only one that is not confounded by lack of standardized measurement and, thus, is the most informative.

In general, Table 4a indicates that the association between CSP and CFP depends on the firm's or researcher's operational definition of each construct, or both. Accounting measures were more highly correlated with CSP than

Table 4a. Subset Meta-Analysis of Operationalization Moderator Effects (Hypothesis 4b)

Operationalization	k [a]	Total Sample Size	Sample-Size Weighted Mean Observed r (r_{obs})	Observed Variance	% Variance Explained[b]	Mean 'True-score' r (mean ρ)	Variance of ρ [$\sigma^2(\rho)$]	File Drawer Analysis[c]
1. CFP operationalizations	388	33,878						
1.a. Market-based	161	10,463	.0733	.0670	24.24	.1459	.1965	75
1.b. Accounting-based	205	20,984	.2070	.0478	33.87	.4215	.1282	644
1.c. Perceptual measures	22	2,431	.4471	.0727	45.64	.8885	.1525	175
2. CSP operationalizations	388	33,878						
2.a. Disclosure	97	5,360	.0438	.0189	98.47	.0871	.0011	NA
2.a.1. Market-based CFP	79	4,426	.0548	.0206	89.75	.1090	.0081	8
2.a.2. Accounting CFP	18	934	–.0085	.0077	100.00	–.0168	.0000	NA
2.b. Reputation indexes	123	12,252	.3657	.0745	34.77	.7268	.1875	777
2.b.1. Market-based CFP	45	4,291	.3593	.0965	26.64	.7141	.2730	278
2.b.2. Accounting CFP	69	6,494	.3059	.0546	39.61	.6078	.1271	353
2.b.3. Perceptual CFP	9	1,467	.6495	.0019	100.00	.9481	.0000	108
2.c. Social audits, corporation behaviours, processes, and outcomes	145	14,200	.0907	.0332	34.00	.1803	.0844	118
2.c.1. Market-based CFP	60	4,858	.0207	.0556	22.58	.0411	.1661	NA
2.c.2. Accounting CFP	82	8,652	.1312	.0188	61.79	.2607	.0277	133
2.c.3. Perceptual CFP	3	690	.0767	.0004	100.00	.1524	.0000	2
2.d. Corporation social responsibility values and attitudes	23	2,066	.1041	.0272	45.94	.2068	.0567	25
2.d.1. Market-based CFP	0	0						
2.d.2. Accounting CFP	13	1,792	.0747	.0178	44.97	.1484	.0377	6
2.d.3. Perceptual CFP	10	274	.2962	.0464	93.90	.5886	.0109	49

[a] k: number of correlation coefficients meta-analysed.
[b] refers to percentage of cross-study observed variance explained by three study artefacts: sampling error, measurement error in CSP, measurement error in CFP.
[c] Hunter and Schmidt's (1990) effect size file drawer analysis: number of missing studies averaging null findings needed to bring r_{obs} down to .05.

Table 4b. Further Subset Analyses of CSP in Terms of Social Audits, Corporation Behaviours, Processes, and Outcomes with CFP (Hypothesis 4b)

Type of CSP	k [a]	Total Sample Size	Sample-Size Weighted Mean Observed r (r_{obs})	Observed Variance	% Variance Explained[b]	Mean 'True-Score' r (mean ρ)	Variance of ρ [$\sigma^2(\rho)$]	File Drawer Analysis[c]
Social audits	35	5,016	.1143	.0081	100.00	.2272	.0000	45
CSP behaviours:								
Philanthropic donations	17	1,283	.1463	.0642	24.60	.2907	.1867	33
Environmental assessment / forecasting	3	401	.0592	.0143	55.62	.1177	.0245	1
Issues management	3	690	.0767	.0004	100.00	.1524	.0000	2
Stakeholder management	7	513	.0717	.0105	100.00	.1425	.0000	3
Environmental management	80	6,297	.0657	.0517	25.83	.1306	.1479	25

[a] k: number of correlation coefficients meta-analysed
[b] refers to percentage of cross-study observed variance explained by three study artefacts: sampling error, measurement error in CSP, measurement error in CFP.
[c] Hunter and Schmidt's (1990) effect size file drawer analysis: number of missing studies averaging null findings needed to bring r_{obs} down to .05.

market-based measures (ρ = .42 as against .15; entries 1.b versus 1.a in Table 4a), and were particularly highly correlated with CSP reputation indices (ρ = .61; entry 2.b.2). In fact, overall the findings with respect to CSP operationalizations suggest that studies that used reputation indices as proxies for CSP showed the highest average correlation with CFP (ρ of .73 with a large variance of .19; entry 2.b in Table 4a). Of course, this high correlation may partially be due to halo (Brown and Perry 1994).

Furthermore, repeating the pattern of results testing reputation-theory effects (Table 3), disclosure measures appear to be only minimally related to CFP (r_{obs} = .04, ρ = .09, as shown in entry 2.a). This finding is generalizable because almost all the observed variance is explained by artefacts. Social audits, CSP processes, and outcomes are only modestly correlated with CFP (r_{obs} = .09, ρ = .18; entry 2.c). Similar mean correlations were found for the relationship between corporate social responsibility values or attitudes and CFP (r_{obs} = .10, ρ =.21; entry 2.d).

The second level in the hierarchical breakdown supports the view that differences in previous findings resulted from study artefacts, stakeholder mismatching, other theoretical mis-specifications, or lack of theory (cf. also McWilliams and Siegel 2000). As discussed above, the overall percentage of cross-study variance (in r_{obs}) explained is 24 percent. In general, this percentage tends to increase in the measurement subgroups listed in Table 4a, which suggests that studies systematically differ with respect to the distortions caused by (previously uncorrected) statistical and methodological artefacts. The fact that artefacts account for 15–100 percent of cross-study variance (the notorious 'inconsistencies' of this research stream) provides support for Hypothesis 4a.

The support for *theoretical* inconsistencies (stakeholder mismatching) becomes apparent by looking at some second-level hierarchical subgroups. First, the correlation of CSP disclosure measures with accounting CFP measures is slightly negative (ρ = –.02; entry 2.a.2). This small correlation supports the stakeholder mismatching thesis because there is no theoretical causal mechanism between CSP disclosures and internal (that is, accounting) CFP measures. Second, the observed and corrected correlations between (a) social audit and other observable or 'objective' (for example, dollar amount of charitable contributions) measures of CSP processes and (b) market-based measures of CFP are close to zero (Table 4a, entry 2.c.1), which again supports the stakeholder mismatching thesis. As Wood and Jones (1995: 242) argued earlier, 'There is no theory to explain why stockholders would or would not prefer a company that gives one percent of pre-tax earnings to charity, that hires and develops minority or women workers, or that ranks higher in pollution control indices.' In other words, the data suggest that capital market participants dismiss certain concrete behavioural measures of CSP (such as charitable donations), perhaps because they are perceived as direct attempts by firms to manage external impressions.

To examine the measurement moderators within subgroup 2.c even more closely, Table 4b shows results for social audits disaggregated from other CSP behaviours, which are further broken down. Two findings are note-

worthy. First, social audits were consistently, but only modestly, correlated with CFP (ρ = .23, 100 per cent of cross-study variance explained). Second, across industry contexts, philanthropic donations were related with CFP at ρ = .29, which was higher than the respective correlation coefficients found for all other measures of CSP behaviours. However, the file drawer analyses (last column of Table 4b) suggest that some of the findings presented in Table 4b are not conclusive because a small number of additional studies could change our conclusions.

Discussion

Theoretical Implications

Based on this meta-analysis integrating 30 years of research, the answer to the introductory question posed by *Business Week* is affirmative. The results of this meta-analysis show that there is a positive association between CSP and CFP across industries and across study contexts. In that sense, we can confirm Frooman's (1997) conclusions, based on event studies, supporting the validity of enlightened self-interest in the social responsibility arena. The data accumulated over the past 30 years do not support the latest contingency theory in the area of corporate social responsibility (McWilliams and Siegel 2001). Like earlier research reviews, McWilliams and Siegel (2001) take inconsistent findings in primary studies at face value (that is, ignore the possible impact of sampling error and measurement error) and explain the (apparent) inconsistency with a demand/supply model of corporate social responsibility. Moreover, the temporal analysis of our meta-analysis shows that the positive association between CFP and lagged CSP (slack resources argument) does not mask a weaker negative association between CSP and lagged CFP.

Can CSP be motivated by an 'ecological selection process based on profit maximization or organizational survival' (Wholey and Brittain 1986, in Husted 2000: 33)? Husted (2000: 34) agrees with the narrative reviews in this area, stating that it is 'premature' to conclude that adaptation to market and non-market environments might force organizations to consider social issues and CSP in their day-to-day strategizing. Our meta-analysis suggests the opposite. In fact, some of our observed correlations are higher than the correlations typically found between strategy-structure fit and CFP (Amburgey and Dacin 1994; Donaldson 1987). Despite those lower correlations, the strategy-structure-performance paradigm is firmly grounded on an economic survival mechanism (across industry contexts) analogous to Hypothesis 1. On the one hand, our meta-analysis contradicts Rowley and Berman's (2000) suggestion that there cannot be a consistently positive relationship between CSP and CFP. On the other hand, in agreement with Rowley and Berman (2000), we demonstrate that the *universally positive* relationship varies (from highly positive to modestly positive) because of contingencies, such as reputation effects, market measures of CFP, or CSP disclosures.

Traditionally, researchers have worried that any positive correlations are artefactual, due to halo effects (Brown and Perry 1994, 1995; Wood 1995). However, it is important to keep in mind that the only credible halo linkage would be from CFP to CSP; that is, companies that perform better financially receive higher CSP ratings, regardless of their true underlying CSP. The meta-analytic breakdown has shown that the potential halo effect (CFP → lagged CSP correlation) does not dominate a weaker CSP → lagged CFP correlation and distort results. In fact, the two correlations are identical at two digits (.29, see Table 2a). Also, when all potentially problematic studies are removed (that is, those that measure CSP reputations only and those that measure CFP with a survey instrument), the meta-analysis still shows a non-trivial positive 'true-score' correlation of .15 (see Table 1). Furthermore, the halo argument would suggest a much higher correlation between external (market) CFP and CSP reputation than between internal (accounting) CFP and CSP reputation. In fact, however, the correlations in both subgroups were similar (entries 2.b.1 versus 2.b.2 in Table 4a).

When the CFP survey measures and CSP reputation measures are removed, the cross-study variation of r_{obs} can be shown to be increasingly a function of the artefacts of sampling and measurement error (44 percent; see entry 2 in Table 1). Thus, many of the negative findings in individual studies are artefactual, so that the generalization of a positive CSP–CFP relationship applies more broadly than previously suggested (for example, Jones and Wicks 1999; Pava and Krausz 1995; Ullmann 1985; Wood and Jones 1995). We can, therefore, state with some confidence that the association between CSP and lagged CFP is not negative. Moreover, the causation seems to be that CSP and CFP mutually affect each other through a virtuous cycle: financially successful companies spend more because they can afford it, but CSP also helps them become a bit more successful. Moreover, the file drawer analysis indicates that the present findings cannot be dismissed by availability bias.

This meta-analysis both rejects and confirms notions developed by neo-classical economists. On the one hand, it rejects the idea that CSP is necessarily inconsistent with shareholder wealth maximization (Friedman 1970; Levitt 1958). Instead, organizational effectiveness may be a broad concept encompassing both financial and social performance (Andrews 1987; Judge 1994). It is also worth noting that, according to most credible versions of stakeholder theory, shareholders are legitimate stakeholders. On the other hand, our findings also confirm the notions of libertarians such as Friedman that government regulation in the area of CSP may not be necessary. If the statistical relationship between CSP and CFP were negative, bottom-line considerations might constitute barriers to outcomes desired by the public, which in turn would make government intervention, which serves the 'public interest', a necessity. Yet, with CSP, the case for regulation and social control by governments (acting on behalf of 'society' or 'the public') is relatively weak because organizations and their shareholders tend to benefit from managers' prudent analysis, evaluation, and balancing of multiple constituents' preferences. Therefore, these actions are most likely adopted

voluntarily, based on managers' cost-benefit analyses of a firm's investments. In contrast, 'socially responsible' command-and-control regulation may prescribe inflexible means–ends chains that are inappropriate for a particular firm's non-market and market environments (Majumdar and Marcus 2001).

Implications for Future Research

The meta-analysis helps to identify areas in which there have been relatively few studies conducted, and which warrant more research (for example, social responsibility values and market CFP; see Table 4a). Additionally, the analysis shows areas in which the unexplained variance across studies remains relatively large, so that further inquiry is needed to identify moderators (for example, CSP reputation measures and market-based CFP; see Table 4a). Moreover, Appendix A shows that the field must make a concerted effort to improve the reliability of CSP and CFP measures. In several subgroups, the percentage of variance of r_{obs} explained by measurement error (that is, low reliability) was substantial. In addition to psychometric refinements, CSP researchers must decide whether CSP 'processes' should really be regarded as a social performance measure. Including processes is equivalent to acknowledging effort. More broadly, some readers may share the authors' concern that previous studies were over-inclusive with respect to definitions of stakeholders and, thus, the CSP proxies (cf. also Roman et al. 1999). We would argue that in future studies, only social and environmental performance 'outcomes' should count as CSP and that the concept of 'stakeholder' must be more restrictive than it currently is.

Another concern that may be raised concerns the different variable CSP measures. This issue needs to be examined in future theoretical and empirical work. We believe that CSP, like CFP, is a valid theoretical construct — admittedly a meta-construct — which can be measured in a variety of ways. Like Meyer and Gupta (1994), we see the possible independence of the operationalizations as a natural outcome of differences in organizational strategies, structures, and environments. Moreover, we share the view of many meta-analysts (for example, Cooper 1989; Dalton et al. 1999; Hunter and Schmidt 1990; Smith and Glass 1977) that broad constructs can, and should, be operationalized in a number of ways. As long as researchers' choices of CSP (and CFP) measures are informed by prior judgements of their theoretical meaningfulness and subjected to peer review, then relatively low correlations across measurement categories do not present an obstacle to research integration. More important to the present case, however, is that our review of CSP generalizability coefficients shows that different CSP measures are, in fact, rather highly correlated (average $r_{xx} = .71$; Appendix A). In other words, conceptual speculations about the impossibility of meaningful integration of prior research are not supported by empirical evidence (for a detailed review of this topic, cf. Orlitzky 1998).

Overall, we reach very different conclusions than Margolis and Walsh (2001). Although we agree with some of their more definitive conclusions as to a positive CSP–CFP relationship, we also argue that our data analysis

shows that interesting questions remain. The research effort does not have to be abandoned because of poor theory or poor methods in this line of inquiry. We are particularly concerned with the conclusions of Margolis and Walsh (2001) because their criticism of *other* studies is argued from the vantage point of a method (the 'vote-counting' literature review) whose lack of validity has been known for more than 20 years (Hedges and Olkin 1980; Hunter and Schmidt 1990). First, they do not take into account sampling and measurement errors. Moreover, their review relies on a binary world-view, which holds that a relationship between CSP and CFP either exists (if results are statistically positive, or negative) or does not exist (if results are mixed or statistically non-significant, which they falsely call 'zero' effects (cf. Cohen 1990, 1994)). The relationship between business and society is too important theoretically to base our conclusions on methodologically ill-advised research reviews.

Implications for Managers

Despite previous assumptions of inconclusive findings (for example, Jones and Wicks 1999; McWilliams and Siegel 2001; Roman et al. 1999; Ullmann 1985; Wood and Jones 1995), we can legitimately derive implications for corporate strategy from the meta-analysis. First and foremost, market forces generally do not penalize companies that are high in corporate social performance; thus, managers can afford to be socially responsible. If managers believe that CSP is an antecedent of CFP, they may eventually actively pursue CSP because they think the market will reward them for doing so. Top managers must learn to use CSP as a reputational lever ($\rho = .73$) and be attentive to the perceptions of third parties, regardless of whether they are market analysts, public interest groups, or the media. Whereas social audits in and of themselves are only moderately beneficial ($\rho = .23$), a company that is high in CSP may especially benefit from receiving public endorsement from federal agencies such as the Environmental Protection Agency or Occupational Safety and Health Administration. As Fombrun (1996) suggested, the key to reaping benefits from CSP is a return from reputation (cf. also Roberts and Dowling 2002).

As findings about the positive relationships between CSP and CFP become more widely known, managers may be more likely to pursue CSP as part of their strategy for attaining high CFP. These strategic management considerations would be consistent with Baron's (2000) managerial approach to the business–society interface. Baron (2000) argues that successful executives are able to integrate market strategies with non-market strategies in order to position their firm for optimal effectiveness. Baron's (2000) book offers guidelines as to how firms can strategically achieve this integration in a number of areas (such as the news media, activists, social movements, legislatures, ethics, and so on). Alternatively, social performance may increase through less deliberate decision processes, as firms emulate others that are experiencing high financial success (DiMaggio and Powell 1983). Either evolutionary process would reduce the importance of coercive control

mechanisms (in the form of government regulations) for effecting public welfare and ecological sustainability. If the mental models of managers and regulators moved to this more libertarian framework, the primary role of regulations would be their signalling function with respect to prioritizing certain issues and certain constituents' claims over others.

Conclusion

Theoretically, portraying managers' choices with respect to CSP and CFP as an either/or trade-off is not justified in light of 30 years of empirical data. This meta-analysis has shown that (1) across studies, CSP is positively correlated with CFP, (2) the relationship tends to be bidirectional and simultaneous, (3) reputation appears to be an important mediator of the relationship, and (4) stakeholder mismatching, sampling error, and measurement error can explain between 15 percent and 100 percent of the cross-study variation in various subsets of CSP–CFP correlations. Corporate virtue in the form of social and, to a lesser extent, environmental responsibility is rewarding in more ways than one.

Appendix A
Overview of Studies Included in Meta-Analysis

Author(s) (year)	N_i	Observed r^b	Number of r's reported	Measure of CSP	Measure of CFP	Reliability of CSP	Reliability of CFP
Abbott and Monsen (1979)	6	.60 (t)	1	Beresford's Social Involvement Disclosure scale (D)	Avg. annual % return to investors	.58, .33	
Alexander and Buchholz (1978)	41, 47	–.25 to .34	4	Reputational ratings (R)	Market return on security	.66	
Anderson and Frankle (1980)	14	–.44 to .87 (t)	18	Social responsibility disclosures, dichotomized (D)	Monthly stock returns, change in EPS, change dividends/share		
Aupperle et al. (1985)	166 to 228	–.04 (t) to .13	6	Carroll's Concern for Society (CSR1)	(LT and ST) ROA (some risk-adjusted)	.86	
Belkaoui (1976)	100	–.23 to .10 (t)	24	Pollution control expenditures in ARs (SA/P/O)	Excess market return of stock		
Blackburn el al. (1994)	88	–.01 to .30	3	1989 Ratings of Council On Economic Priorities (CEP) (SA/P/O)	RAO, excess market return, EPS		
Bowman (1976)				Criterion validity of CSR1 disclosures (CSR1)		.64	
Bowman (1978)	46	.19 (t)	1	Coding of ARs for CSR1 (D)	ROSBTA	.44	
Bowman and Haire (1975)	3	.30, .35 (t)	2	CSR1 in ARs, CEP Indexes (D)	ROE		
Bragdon and Marlin (1972)	12	.22 to .69	15	3 CEP Indexes (SA/P/O)	EPS growth, ROE, ROC		
Brown and Perry (1994)				KLD scores and Fortune ratings (SA/P/O, R)		.34	
Brown and Perry (1995)	119 to 232	49 to 62	10	Fortune's rating of 'responsibility to the community/environment' (R)	Composite of (1) ROA, (2) market/book value, (3) log (sales), and (4) risk		
Chen and Metcalf (1980)	18	–.04, .21	2	CEP ratings (SA/P/O)	Profitability, P/E ratio	.93	
Cochran and Wood (1984)	6	.72 to .91 (t)	9	Moskowitz reputation index (R)	OE/Assets, OE/sales, excess market valuation		.63
Conine and Madden (1987)	163	.58 to .72	9	Erdos & Morgan's Corp. Reputation Survey (R)	Perceptual/expectational survey measures		

Cowen et al. (1987)	10 to 15	–.25 to .18	9	Number of various CSR1 disclosures (D)	ROE		
Davidson and Worrell (1992)	51	–.09 to .24 (t)	8	Voluntary (vs. government–ordered) product recall announcements (CSP in the face of adversity) (D)	Daily security returns (mean cumulative prediction error)		
Dooley and Lerner (1994)	86	.07 to .21	4	Stakeholder orientations/ emphasis (CSR1)	Firm-specific ROA/Industry's avg. ROA		
Fogler and Nutt (1975)	9	–.27 to –.02 5	3	CEP Indexes (SA/P/O)	P/E ratio	.95	
Fombrun and Shanley (1990)	154	.00 to .26	9	Charitable contributions, existing separately endowed foundation (yes/no), and favourability media ratings (SA/P/O, R)	ROIC, market-to-book value ratio, yield	.88	
Freedman and Jaggi (1982)	109	–.04 to .01	7	AR/10K pollution disclosure index (D)	(Cash-basis) ROA and ROE, 2 operating ratios	.15, .37	
Freedman and Jaggi (1986)	56	–.15 to .32 (t)	34	Extent of CSR1 disclosure (D)	Avg. standardized market return residuals	.38	
Graves and Waddock (1994)	430	.03, .15	2	Kinder, Lydenberg, Domini (KLD) measure (SA/P/O)	ROA, ROE		
Greening (1995)	131	.01 to .22	15	4 dimensions of electric utility demand-side management (DSM) programmes, CSP reputation (SA/P/O, R)	ROA, EPS, dividend yield	.24	
Griffin and Mahon (1997)	7	–.59 to .51	13	Fortune rating, KLD score, Toxics Release Inventory (TRI, reverse-coded), philanthropy (R, SA/P/O)	ROS, ROE, ROA	.35, .73	.71
Hansen and Wernerfelt (1989)	60	.60	1	Emphasis on welfare of employees and good working conditions (survey) (CSR1)	ROA — T-bill (risk-free) rate		
Heinze (1976)	28	–.34 to .51	5	National Affiliation of Concerned Business Students (NACBS) ratings of social involvement (R)	Sales growth rate, ROS, OE/sales, ROA, ROE		
Herremans et al. (1993)	38	–.13 to .48	12	Fortune 'responsibility to the community/environment' rating (R)	Abnormal market returns	.71	

Appendix A *continued*
Overview of Studies Included in Meta-Analysis

Author(s) (year)	N_i	Observed r^b	Number of r's reported	Measure of CSP	Measure of CFP	Reliability of CSP	Reliability of CFP
Ingram (1978)	96, 120	–.01 to .06 (t)	12	CSR1 disclosures in 5 areas (D)	Avg. monthly portfolio returns		
Ingram and Frazier (1980)	40			CSR1	Disclosures and CEP ratings (D, SA/P/0)	.15	
Jacobson (1987)	4338, 4579				ROI, stock return		.14, .23, .27, .39
Kedia and Kuntz (1981)	27, 30	–.28 to .25	5	5 measures of actual CSP outcomes (SA/P/0)	ROA	.05	
Levy and Shatto (1980)	55	.69 to .74	3	Charitable contributions to different causes (SA/P/O)	Net income		
Long and Ravenscraft (1984)					Accounting rate of return and economic rate of return		.79, .89, .89
Marcus and Goodman (1986)	22, 27	Not included b/c F-statistics unclear		Compliance with air pollution regulation	ROA, ROE		
McGuire et al. (1988)	98, 131	–.21 to .52	18	Fortune 'responsibility to community/environment' ratings (R)	Return (alpha), ROA, sales, growth, asset growth, op. income growth	.90, .47	
Newgren et al. (1985)	50	.33(t)	1	'Institutionalization' of environmental assessment (SA/P/O)	Firm P/E ratio over industry P/E ratio		
O'Neill et al. (1989)	157	–.13 to .15	4	Aupperte's Concern for Society (CSRI)	LT, ST (risk-adjusted) ROA		
Parket and Eilbirt (1975)	3	.89 to 1.00 (t)	Not included for various reasons	Response vs. Non-response to social responsibility questionnaire	Net income, ROS, ROE, EPS		
Patten (1990)	74	–.10 to .25 (t)	7	Information disclosure w.r.t. Sullivan Principles (D)	Mean abnormal (unexpected) market returns		

Pava and Krausz (1995)	14	–.22 to .66 (t)	7	Dichotomization based on Council on Economic Priorities rankings (SA/P/O)	Market return, P/E ratio, market-to-book value, ROA, ROE, EPS, dividend payout ratio		
Preston (1978b)	3	.50 (t)	1	Social involvement reporting (D)	Market rate of return on stock		
Reimann (1975)	19	.00 to .69	8	Osgood's semantic differential measure of public values (CSRI)	Survey goal achievement rating in comparison to other organizations		.39
Riahi-Belkaoui (1991)	139	Not included		Fortune's 'responsibility to community/environment' measure (R)	10-years' EPS growth, P/E ratio		
Roberts (1992)	130	.16, .20	2	CEP measure of social disclosure, philanthropic foundation? (Y/N) (SA/P/O)	ROA, firm growth		
Russo and Fouts (1997)	486	.13, .16	2	Franklin Research and Development corp. environmental performance ratings (SA/P/O)	ROA, firm growth		
Shane and Spicer (1983)	48	–.74 to .96 (t)	24	Dichotomized pollution-control performance index (SA/P/O)	Abnormal mean-adjusted returns		
Sharfman (1996)	varies			KLD scores, Fortune ratings, and 'social choice' mutual fund holdings (SA/P/O, R)		.33, .47	
Simerly (1994)	110	.01 to.88 (t)	14	Fortune reputation scores, dichotomized (R)	EPS, share price, market value, ROE, sales/equity, ROI, sales rate		
Simerly (1995)	48	.59 (t)	1	Dichotomized Fortune survey measure (R)	ROE		
Spencer and Taylor (1987)	107, 120	–.06 to .54	20	Fortune 'responsibility to community /environment' (R)	ROA, ROS		
Spicer (1978)	18	.42, .52	2	Council on Economic Priorities report (SA/P/O)	ROE	.93	
Starik (1990)	193	–.02, .14	2	7 stakeholder management strategies (survey), combined (SA/P/O)	ROI, change in revenues	.85	
Sturdivant and Ginter	18, 22	.58, .72 (t)	2	Moskowitz ratings (R)	EPS growth relative to industry		

Appendix A *continued*
Overview of Studies Included in Meta-Analysis

Author(s) (year)	N_i	Observed r[b]	Number of r's reported	Measure of CSP	Measure of CFP	Reliability of CSP	Reliability of CFP
Turban and Greening (1997)	160	–.07 to .25	6	KLD ratings (5 dimensions), reputation (SA/P/O, R)	Profitability (ROA)	.23, .18	
Vance (1975)	14, 45, 50	–.51 to –.20	3	Survey ratings, Moskowitz rankings (reverse-coded) (R)	Change in share price	.70, .66	
Venkatraman and Ramanujam (1987)	86				Primary/perceptual measures of sales growth, net income growth, and ROI compared to objective secondary measures relative to industry		.36, .44, .42, .51
Waddock and Graves (1997)	469	.08 to .17	6	8 KLD dimensions (SA/P/O)	ROA, ROE, ROS		.57
Wartick (1988)	230	.05 to .10 (t)	3	Use of issues management (SA/P/O)	Survey ratings: LT investment value, soundness of financial position, and wise use of corporation assets	.75	
Wiseman (1982)	26			Social disclosures and CEP pollution audit rankings (D, SA/P/O)		.15, .37	
Wokutch and Spencer (1987)	4, 8	.80 to.84 (t)	3	Philanthropy/sales and crimes: 4 cell classification (SA/P/O)	ROA, ROS	.64	
Wolfe (1991)	9 corps.			CSRI disclosures (inter-rater and test-retest rel., cnt. validity) (D)		.87, .99, .69	

[a] Classification of CSP (in parentheses): D = disclosures/content analysis; R = reputational indices; SA/P/O = social audit, process and outcome measures; CSR1 = Aupperle's and others' measures of corporate principles and values.
[b] (t): refers to transformation procedure, usually *t*-test statistic converted to *PM r*: in some cases, transformation of *d* to *r*.

Note

This article is based on Marc Orlitzky's 1998 dissertation thesis. The authors would like to thank Lex Donaldson, Steve Frenkel, Peter Hansen, David Jacobs, Barry Markovsky, Jim Price, and Jerry Rose for many helpful comments on earlier drafts.

References

References marked with an asterisk indicate studies included in the meta-analysis.

* Abbott, Walter F., and Joseph R. Monsen
1979 'On the measurement of corporate social responsibility: Self-reported disclosure as a method of measuring corporate social involvement'. *Academy of Management Journal* 22: 501–515.

Aldag, Ramon J., and Kathryn M. Bartol
1978 'Empirical studies of corporate social performance and policy: A survey of problems and results' in *Research in corporate social performance and policy*. Lee E. Preston (ed.), 1, 165–199. Greenwich, CT: JAI Press.

* Alexander, Gordon J., and Rogene A. Buchholz
1978 'Corporate social performance and stock market performance'. *Academy of Management Journal* 21: 479–486.

Amburgey, T. L., and T. Dacin
1994 'As the left foot follows the right? The dynamics of strategic and structural change'. *Academy of Management Journal* 37: 1427–1452.

* Anderson, John C., and Alan W. Frankle
1980 'Voluntary social reporting: An iso-beta portfolio analysis'. *Accounting Review* 55: 467–479.

Andrews, K. R.
1987 *The concept of corporate strategy*, 3rd edn. Homewood, IL: Irwin.

Aupperle, Kenneth E.
1984 'An empirical measure of corporate social orientation' in *Research in corporate social performance and policy*. Lee E. Preston (ed.), 6, 27–54. Greenwich, CT: JAI Press.

Aupperle, Kenneth E.
1991 'The use of forced-choice survey procedures in assessing corporate social orientation' in *Research in corporate social performance and policy*. James E. Post (ed.), 12, 269–279. Greenwich, CT: JAI Press.

* Aupperle, Kenneth E., Archie B. Carroll, and John D. Hatfield
1985 'An empirical investigation of the relationship between corporate social responsibility and profitability'. *Academy of Management Journal* 28: 446–463.

Barney, Jay
1991 'Firm resources and sustained competitive advantage'. *Journal of Management* 17: 771–792.

Baron, D. P.
2000 *Business and its environment*, 3rd edn. Upper Saddle River, NJ: Prentice Hall.

* Belkaoui, Ahmed
1976 'The impact of the disclosure of the environmental effects of organizational behavior on the market'. *Financial Management* 5: 26–31.

* Blackburn, V. L., M. Doran, and C. B. Shrader
1994 'Investigating the dimensions of social responsibility and the consequences for corporate financial performance'. *Journal of Managerial Issues* 6: 195–212.

* Bowman, Edward H.
1976 'Strategy and the weather'. *Sloan Management Review* 17: 49–58.

* Bowman, Edward H.
1978 'Strategy, annual reports, and alchemy'. *California Management Review* 20: 64–71.

* Bowman, Edward H., and Mason Haire
1975 'A strategic posture toward corporate social responsibility'. *California Management Review* 18: 49–58.

* Bragdon, Joseph H., Jr., and John A. T. Marlin
1972 'Is pollution profitable?' *Risk Management* 19: 9–18.

* Brown, Brad, and Susan Perry
1994 'Removing the financial performance halo from *Fortune*'s "Most Admired Companies"'. *Academy of Management Journal* 37: 1346–1359.

* Brown, Brad, and Susan Perry
1995 'Halo-removed residuals of *Fortune*'s "responsibility to the community and environment": A decade of data'. *Business & Society* 34: 199–215.

Business Week
1999 'The next bottom line', Asian edn, 3 May: 45–96.

Carroll, Archie B.
1979 'A three-dimensional conceptual model of corporate social performance'. *Academy of Management Review* 4: 497–506.

Carroll, Archie B.
1991 'Corporate social performance measurement: A commentary on methods for evaluating an elusive construct' in *Research in corporate social performance and policy*. James E. Post (ed.), 12, 385–401. Greenwich, CT: JAI Press.

* Chen, Kung H., and Richard W. Metcalf
1980 'The relationship between pollution control record and financial indicators revisited'. *Accounting Review* 55: 168–177.

Clarkson, Max B. E.
1991 'Defining, evaluating, and managing corporate social performance: The stakeholder management model' in *Research in corporate social performance and policy*. James E. Post (ed.), 12, 331–358. Greenwich, CT: JAI Press.

Clarkson, Max B. E.
1995 'A stakeholder framework for analyzing and evaluating corporate social performance'. *Academy of Management Review* 20: 92–117.

* Cochran, Phillip L., and Robert A. Wood
1984 'Corporate social responsibility and financial performance'. *Academy of Management Journal* 27: 42–56.

Cohen, J.
1990 'Things I have learned (so far)'. *American Psychologist* 45: 1304–1312.

Cohen, J.
1994 'The Earth is round ($p < .05$)'. *American Psychologist* 49: 997–1003.

* Conine, Thomas E., and Gerald P. Madden
1987 'Corporate social responsibility and investment value: The expectational relationship' in *Handbook of business strategy 1986/1987 yearbook*. W. D. Guth (ed.), 18–1 to 18–9. Boston, MA: Warren, Gorham, & Lamont.

Cook, Thomas D., and Donald T. Campbell
1979 *Quasi-experimentation: Design & analysis issues for field settings*. Boston, MA: Houghton Mifflin.

Cooper, Harris M.
1989 *Integrating research: A guide for literature reviews*, 2nd edn. Newbury Park, CA: Sage.

Cornell, Bradford, and Alan Shapiro
1987 'Corporate stakeholders and corporate finance'. *Financial Management* 16: 5–14.

* Cowen, Scott S., Linda B. Ferreri and Lee D. Parker
1987 'The impact of corporate characteristics on social responsibility disclosure: A typology and frequency-based analysis'. *Accounting, Organizations and Society* 12: 111–122.

Cronbach, Lee J., Goldine C. Gleser, Harinder Nanda, and Nageswari Rajaratnam
1972 *The dependability of behavioral measurements: Theory of generalizability of scores and profiles*. New York: Wiley.

Dalton, D. R., C. M. Daily, J. L. Johnson, and A. E. Ellstrand
1999 'Number of directors and financial performance: A meta-analysis'. *Academy of Management Journal* 42: 674–686.

Damanpour, Fariborz
1991 'Organizational innovation: A meta-analysis of effects of determinants and moderators'. *Academy of Management Journal* 34: 555–590.

Datta, Deepak K., George E. Pinches, and V. K. Narayanan
1992 'Factors influencing wealth creation from mergers and acquisitions: A meta-analysis'. *Strategic Management Journal* 13: 67–84.

* Davidson, Wallace N. III, and Dan L. Worrell
1992 'Research notes and communications: The effect of product recall announcements on shareholder wealth'. *Strategic Management Journal* 13: 467–473.

Davis, Keith
1973 'The case for and against business assumptions of social responsibilities'. *Academy of Management Journal* 16: 312–317.

DiMaggio, Paul J., and Walter W. Powell
1983 'The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields'. *American Sociological Review* 48: 147–160.

Donaldson, Lex
1987 'Strategy and structural adjustment to regain fit and performance: In defense of contingency theory'. *Journal of Management Studies* 24: 1–24.

Donaldson, Thomas
1999 'Response: Making stakeholder theory whole'. *Academy of Management Review* 24: 237–241.

Donaldson, Thomas, and Lee E. Preston
1995 'The stakeholder theory of the corporation: Concepts, evidence, and implications'. *Academy of Management Review* 20: 65–91.

* Dooley, Robert S., and Linda D. Lerner
1994 'Pollution, profits, and stakeholders: The constraining effect of economic performance on CEO concern with stakeholder expectations'. *Journal of Business Ethics* 13: 701–711.

* Fogler, H. Russell, and Fred Nutt
1975 'A note on social responsibility and stock valuation'. *Academy of Management Journal* 18: 155–160.

Fombrun, Charles J.
1996 *Reputation: Realizing value from the corporate image*. Boston, MA: Harvard Business School Press.

* Fombrun, Charles, and Mark Shanley
1990 'What's in a name? Reputation building and corporate strategy'. *Academy of Management Journal* 33: 233–258.

* Freedman, Martin, and Bikki Jaggi
1982 'Pollution disclosures, pollution performance and economic performance'. *Omega: The International Journal of Management Science* 10: 167–176.

* Freedman, Martin, and Bikki Jaggi
1986 'An analysis of the impact of corporate pollution disclosures included in annual financial statements on investors' decisions'. *Advances in Public Interest Accounting* 1: 192–212.

Freeman, R. Edward
1984 *Strategic management: A stakeholder approach*. Marshfield, MA: Pitman.

Freeman, R. Edward, and William M. Evan
1990 'Corporate governance: A stakeholder interpretation'. *Journal of Behavioral Economics* 19/4: 337–359.

Friedman, Milton
1970 'The social responsibility of business is to increase its profits'. *New York Times Magazine*, 13 September: 33ff.

Frooman, Jeff
1997 'Socially irresponsible and illegal behavior and shareholder wealth: A meta-analysis of event studies'. *Business & Society* 36: 221–249.

Gephardt, Richard P., Jr.
1991 'Multiple methods for tracking corporate social performance: Insights from a study of major industrial accidents' in *Research in corporate social performance and policy*. James E. Post (ed.), 12, 359–383. Greenwich, CT: JAI Press.

Gooding, Richard Z., and John A. Wagner, III
1985 'A meta-analytic review of the relationship between size and performance: The productivity and efficiency of organizations and their subunits'. *Administrative Science Quarterly* 30: 462–481.

* Graves, Samuel B., and Sandra A. Waddock
1994 'Institutional owners and corporate social performance'. *Academy of Management Journal* 37: 1034–1046.

* Greening, Daniel W.
1995 'Conservation strategies, firm performance, and corporate reputation in the U.S. electric utility industry' in *Research in Corporate Social Performance and Policy, Supplement 1*, 345–368. Greenwich, CT: JAI Press.

Greening, D. W., and D. B. Turban
2000 'Corporate social performance as a competitive advantage in attracting a quality workforce'. *Business & Society* 39: 254–280.

* Griffin, Jennifer J., and John F. Mahon
1997 'The corporate social performance and corporate financial performance debate: Twenty-five years of incomparable research'. *Business & Society* 36: 5–31.

* Hansen, Gary S., and Birger Wernerfelt
1989 'Determinants of firm performance: The relative importance of economic and organizational factors'. *Strategic Management Journal* 10: 399–411.

Hart, Stuart L.
1995 'A natural resource-based view of the firm'. *Academy of Management Review* 20: 986–1014.

Hedges, Larry V.
1987 'How hard is hard science, how soft is soft science? The empirical cumulativeness of research'. *American Psychologist* 42/2: 443–455.

Hedges, Larry V., and Ingram Olkin
1980 'Vote counting methods in research synthesis'. *Psychological Bulletin* 88: 359–369.

* Heinze, David C.
1976 'Financial correlates of a social involvement measure'. *Akron Business and Economic Review* 7: 48–51.

* Herremans, Irene M., Parporn Akathaporn and Morris McInnes
1993 'An investigation of corporate social responsibility reputation and economic performance'. *Accounting, Organizations and Society* 18: 587–604.

Hill, Charles W. L., and Thomas M. Jones
1992 'Stakeholder-agency theory'. *Journal of Management Studies* 29: 131–154.

Hunt, Morton
1997 *How science takes stock: The story of meta-analysis*. New York: Russell Sage Foundation.

Hunter, John E., and Frank L. Schmidt
1990 *Methods of meta-analysis: Correcting errors and bias in research findings*. Newbury Park, CA: Sage.

Husted, Brian W.
2000 'A contingency theory of corporate social performance'. *Business & Society* 39: 24–48.

* Ingram, Robert W.
1978 'An investigation of the information content of (certain) social responsibility disclosures'. *Journal of Accounting Research* 16: 270–285.

* Ingram, Robert W., and Katherine B. Frazier
1980 'Environmental performance and corporate disclosure'. *Journal of Accounting Research* 18: 614–622.

* Jacobson, Robert
1987 'The validity of ROI as a measure of business performance'. *American Economic Review* 77: 470–478.

Jones, Thomas M.
1995 'Instrumental stakeholder theory: A synthesis of ethics and economics'. *Academy of Management Review* 20: 404–437.

Jones, Thomas M., and Andrew C. Wicks
1999 'Convergent stakeholder theory'. *Academy of Management Review* 24: 206–221.

Judge, W. Q., Jr.
1994 'Correlates of organizational effectiveness: A multilevel analysis of a multidimensional outcome'. *Journal of Business Ethics* 13: 1–10.

* Kedia, B. L., and E. C. Kuntz
1981 'The context of social performance: An empirical study of Texas banks' in *Research in corporate social performance and policy*. Lee E. Preston (ed.), 3, 133–154. Greenwich, CT: JAI Press.

Ketchen, David J., Jr., James G. Combs, Craig J. Russell, Chris Shook, et al.
1997 'Organizational configurations and performance'. *Academy of Management Journal* 40: 223–240.

Levitt, T.
1958 'The dangers of social responsibility'. *Harvard Business Review*, September–October, 36: 38–44.

* Levy, F. K., and G. M. Shatto
1980 'Social responsibility in large electric utility firms: The case for philanthropy' in *Research in corporate social performance and policy*. Lee E. Preston (ed.), 2, 237–249. Greenwich, CT: JAI Press.

Light, R. J., and P. V. Smith
1971 'Accumulating evidence: Procedures for resolving contradictions among different research studies'. *Harvard Educational Review* 41: 429–471.

* Long, William F., and David J. Ravenscraft
1984 'The misuse of accounting rates of return: Comment'. *American Economic Review* 74: 494–501.

McGuire, J. B., T. Schneeweis, and B. Branch
1990 'Perceptions of firm quality: A cause or result of firm performance'. *Journal of Management* 16: 167–180.

* McGuire, J. B., Alison Sundgren, and Thomas Schneeweis
1988 'Corporate social responsibility and firm financial performance'. *Academy of Management Journal* 31: 854–872.

McWilliams, A., and D. Siegel
2000 'Corporate social responsibility and financial performance: Correlation or misspecification?' *Strategic Management Journal* 21: 603–609.

McWilliams, A., and D. Siegel
2001 'Corporate social responsibility: A theory of the firm perspective'. *Academy of Management Review* 26: 117–127.

Majumdar, Sumit K., and Alfred A. Marcus
2001 'Rules versus discretion: The productivity consequences of flexible regulations'. *Academy of Management Journal* 44: 170–179.

* Marcus, Alfred A., and Richard S. Goodman
1986 'Compliance and performance: Toward a contingency theory' in *Research in corporate social performance and policy*. Lee E. Preston (ed.), 8, 193–221. Greenwich, CT: JAI Press.

Margolis, J. D., and J. P. Walsh
2001 *People and profits? The search for a link between a company's social and financial performance*. Mahwah, NJ: Erlbaum.

Meyer, Marshall W., and Vipin Gupta
1994 'The performance paradox'. *Research in Organizational Behavior* 16: 309–369.

Mitchell, Ronald K., Bradley R. Agle, and Donna J. Wood
1997 'Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts'. *Academy of Management Review* 22: 853–886.

Moskowitz, Milton R.
1972 'Choosing socially responsible stocks'. *Business and Society Review* 1: 71–75.

Moskowitz, Milton R.
1975 'Profiles in corporate social responsibility'. *Business and Society Review* 13: 29–42.

* Newgren, K. E., A. A. Rasher, M. E. LaRoe, and M. R. Szabo
1985 'Environmental assessment and corporate performance: A longitudinal analysis using a market-determined performance measure' in *Research in corporate social performance and policy*. Lee E. Preston (ed.), 7, 153–164. Greenwich, CT: JAI Press.

Nunnally, Jum C., and Ira H. Bernstein
1994 *Psychometric theory*, 3rd edn. New York: McGraw-Hill.

* O'Neill, Hugh M., Charles B. Saunders, and Anne D. McCarthy
1989 'Board members, corporate social responsiveness and profitability: Are tradeoffs necessary?' *Journal of Business Ethics* 8: 353–357.

Orlitzky, Marc
1998 'A meta-analysis of the relationship between corporate social performance and firm financial performance', dissertation thesis. University of Iowa, UMI.

* Parket, I. Robert, and Henry Eilbirt
1975 'Social responsibility: The underlying factors'. *Business Horizons* 18: 5–10.

* Patten, Dennis M.
1990 'The market reaction to social responsibility disclosures: The case of the Sullivan Principles signings'. *Accounting, Organizations and Society* 15: 575–587.

* Pava, Moses L., and Joshua Krausz
1995 *Corporate responsibility and financial performance: The paradox of social cost*. Westport, CT: Quorum.

Post, James E. (ed.)
1991 *Research in corporate social performance and policy*, Vol. 12. Greenwich, CT: JAI Press.

Preston, Lee E.
1978a 'Corporate social performance and policy: A synthetic framework for research and analysis' in *Research in corporate social performance and policy*. Lee E. Preston (ed.), 1, 1–25. Greenwich, CT: JAI Press.

* Preston, Lee E.
1978b 'Analyzing corporate social performance: Methods and results'. *Journal of Contemporary Business* 7: 135–150.

Price, James L., and Charles W. Mueller
1986 *Handbook of organizational measurement*, 2nd edn. Marshfield, MA: Pitman.

* Reimann, Bernard C.
1975 'Organizational effectiveness and management's public values: A canonical analysis'. *Academy of Management Journal* 18: 224–241.

* Riahi-Belkaoui, Ahmed
1991 'Organizational effectiveness, social performance and economic performance' in *Research in corporate social performance and policy*. James E. Post (ed.), 12, 143–153. Greenwich, CT: JAI Press.

Roberts, Peter W., and Grahame R. Dowling
2002 'Corporate reputation and sustained superior financial performance'. *Strategic Management Journal* 23: 1077–1093.

* Roberts, Robin W.
1992 Determinants of corporate social responsibility disclosure: An application of stakeholder theory'. *Accounting, Organizations and Society* 17: 595–612.

Roman, R. M., S. Hayibor, and B. R. Agle
1999 'The relationship between social and financial performance: Repainting a portrait'. *Business & Society* 38: 109–125.

Rosenthal, Robert
1995 'Writing meta-analytic reviews'. *Psychological Bulletin* 118: 183–192.

Rosenthal, R., and DiMatteo, M. R.
2001 'Meta-analysis: Recent developments in quantitative methods for literature reviews'. *Annual Review of Psychology* 52: 59–82.

Roth, Philip L., Craig A. BeVier, Fred S. Switzer, III., and Jeffrey S. Schippmann
1996 'Meta-analyzing the relationship between grades and job performance'. *Journal of Applied Psychology* 81: 548–557.

Rowley, Timothy J.
1997 'Moving beyond dyadic ties: A network theory of stakeholder influences'. *Academy of Management Review* 22: 887–910.

Rowley, Timothy J., and Shawn Berman
2000 'A brand new brand of corporate social performance'. *Business & Society* 39: 397–418.

* Russo, Michael V., and Paul A. Fouts
1997 'A resource-based perspective on corporate environmental performance and profitability'. *Academy of Management Journal* 40: 534–559.

Schmidt, Frank L.
1992 'What do data really mean? Research findings, meta-analysis, and cumulative knowledge in psychology'. *American Psychologist* 47: 1173–1181.

Schmidt, Frank L., and John E. Hunter
1977 'Development of a general solution to the problem of validity generalization'. *Journal of Applied Psychology* 62: 529–540.

Schwenk, Charles
1989 'A meta-analysis on the comparative effectiveness of devil's advocacy and dialectical inquiry'. *Strategic Management Journal* 10: 303–306.

* Shane, Phillip B., and Barry H. Spicer
1983 'Market response to environmental information produced outside the firm'. *Accounting Review* 58: 521–538.

* Sharfman, Mark
1996 'A concurrent validity study of the KLD social performance ratings data'. *Journal of Business Ethics* 15: 287–296.

Shavelson, Richard J., Noreen M. Webb, and Glenn L. Rowley
1989 'Generalizability theory'. *American Psychologist* 44: 922–932.

Shrivastava, Paul
1995 'Ecocentric management for a risk society'. *Academy of Management Review* 20: 118–137.

* Simerly, Roy L.
1994 'Corporate social performance and firms' financial performance: An alternative perspective'. *Psychological Reports* 75: 1091–1103.

* Simerly, Roy L.
1995 'Institutional ownership, corporate social performance, and firms' financial performance'. *Psychological Reports* 77: 515–525.

Smith, M. L., and G. V. Glass
1977 'Meta-analysis of psychotherapy outcome studies'. *American Psychologist* 32: 752–760.

* Spencer, Barbara A., and Stephen G. Taylor
1987 'A within and between analysis of the relationship between corporate social responsibility and financial performance'. *Akron Business and Economic Review* 18: 7–18.

* Spicer, Barry H.
1978 'Investors, corporate social performance and information disclosure: An empirical study'. *Accounting Review* 53: 94–111.

* Starik, Mark
1990 'Stakeholder management and firm performance: Reputation and financial relationships to U.S. electric utility consumer-related strategies', unpublished doctoral dissertation. University of Georgia, Athens.

Starik, Mark
1995 'Should trees have managerial standing? Toward stakeholder status for non-human nature'. *Journal of Business Ethics* 14: 207–217.

* Sturdivant, Frederick D., and James L. Ginter
1977 'Corporate social responsiveness: Management attitudes and economic performance'. *California Management Review* 19: 30–39.

Traub, Ross E.
1994 *Reliability for the social sciences: Theory and applications*, Vol. 3. Thousand Oaks, CA: Sage.

* Turban, Daniel B., and Daniel W. Greening
1997 'Corporate social performance and organizational attractiveness to prospective employees'. *Academy of Management Journal* 40: 658–672.

Ullmann, Arieh
1985 'Data in search of a theory: A critical examination of the relationship among social performance, social disclosure, and economic performance'. *Academy of Management Review* 10: 540–577.

* Vance, Stanley
1975 'Are socially responsible firms good investment risks?' *Management Review* 64: 18–24.

Venkatraman, N., and Vasudevan Ramanujam
1986 'Measurement of business performance in strategy research: A comparison of approaches'. *Academy of Management Review* 11: 801–814.

* Venkatraman, N., and Vasudevan Ramanujam
1987 'Measurement of business economic performance: An examination of method convergence'. *Journal of Management* 13: 109–122.

* Waddock, Sandra A., and Samuel B. Graves
1997 'The corporate social performance-financial performance link'. *Strategic Management Journal* 18: 303–319.

Waddock, Sandra A., and John F. Mahon
1991 'Corporate social performance revisited: Dimensions of efficacy, effectiveness, and efficiency' in *Research in corporate social performance and policy*. James E. Post (ed.), 12, 231–262). Greenwich, CT: JAI Press.

Wagner, John A., II., and Richard Z. Gooding
1987 'Effects of societal trends on participation research'. *Administrative Science Quarterly* 32: 241–262.

* Wartick, Stephen L.
1988 'How issues management contributes to corporate performance'. *Business Forum* 13: 16–22.

Wartick, Stephen L., and Phillip L. Cochran
1985 'The evolution of the corporate social performance model'. *Academy of Management Review* 10: 758–769.

Webb, Eugene J., D. Campbell, R. Schwartz, L. Sechrest, and J. Grove
1981 *Nonreactive measures in the social sciences*. Boston, MA: Houghton Mifflin.

Wernerfelt, Birger
1984 'A resource-based view of the firm'. *Strategic Management Journal* 5: 171–180.

Wholey, D. R., and J. W. Brittain
1986 'Organizational ecology: Findings and implications'. *Academy of Management Review* 11: 513–533.

Willums, Jan-Olaf
1999 'Social responsibility and shareholder value'. *Business Week* (Asian Edition), 3 May: 85.

* Wiseman, Joanne
1982 'An evaluation of environmental disclosures made in corporate annual reports'. *Accounting, Organizations and Society* 7: 53–63.

Wokutch, Richard E., and E. W. McKinney
1991 'Behavioral and perceptual measures of corporate social performance' in *Research in corporate social performance and policy*. James E. Post (ed.), 12, 309–330. Greenwich, CT: JAI Press.

* Wokutch, Richard E., and Barbara A. Spencer
1987 'Corporate sinners and saints: The effects of philanthropic and illegal activity on organizational performance'. *California Management Review* 29: 62–77.

* Wolfe, Robert
1991 'The use of content analysis to assess corporate social responsibility' in *Research in corporate social performance and policy*. James E. Post (ed.), 12, 281–307. Greenwich, CT: JAI Press.

Wolfe, Robert, and Kenneth E. Aupperle
1991 'Introduction' in *Research in corporate social performance and policy*. James E. Post (ed.), 12, 265–268. Greenwich, CT: JAI Press.

Wood, Donna J.
1991a 'Corporate social performance revisited'. *Academy of Management Review* 16: 691–718.

Wood, Donna J.
1991b 'Social issues in management: Theory and research in corporate social performance'. *Journal of Management* 17: 383–406.

Wood, Donna J.
1995 'The *Fortune* database as a CSP measure'. *Business & Society* 34: 197–198.

Wood, Donna J., and Raymond E. Jones
1995 'Stakeholder mismatching: A theoretical problem in empirical research on corporate social performance'. *International Journal of Organizational Analysis* 3: 229–267.

Marc Orlitzky Marc Orlitzky (Ph.D., University of Iowa) is Lecturer at the Australian Graduate School of Management (AGSM), which is jointly owned by the University of Sydney and the University of New South Wales. His work focuses on business ethics, human resource management, and small-group communication. Since 1997, his research has been accepted by publication outlets such as *Business & Society*, *Journal of Business Ethics*, *Research in Corporate Social Performance and Policy*, *Personnel Psychology*, *Trends in Organizational Behavior*, *Small Group Research*, *Academy of Management Review*, and *Journal of Personal & Interpersonal Loss*.
Address: AGSM, UNSW Sydney NSW 2052, Australia.
E-mail: marco@agsm.edu.au.

Frank L. Schmidt Frank L. Schmidt (Ph.D., Purdue University) is Ralph L. Sheets Professor of Management & Organizations at the University of Iowa's Henry B. Tippie College of Business. He has authored numerous articles, book chapters, and books on meta-analysis, personnel selection, employment testing, workforce productivity, and decision theory. He is a Fellow of the American Psychological Association and a Charter Fellow of the American Psychological Society, and serves on the editorial boards of *Journal of Applied Psychology* and *Quantitative Series in the Social Sciences*.
Address: Department of Management & Organizations, W252 PBAB, University of Iowa, Iowa City, IA 52242-1000, USA.
E-mail: fschmidt@blue.weeg.uiowa.edu

Sara L. Rynes Sara L. Rynes (Ph.D., University of Wisconsin) is John F. Murray Professor of Management & Organizations at the University of Iowa's Henry B. Tippie College of Business. She has authored more than 45 articles and book chapters on human resource strategy, recruitment and selection, careers, compensation, training, diversity, and quality management. She is a Fellow of the American Psychological Association and the Society for Industrial and Organizational Psychology, and serves on the editorial boards of *Academy of Management Journal*, *Journal of Applied Psychology*, *Personnel Psychology*, and *Frontiers in Industrial and Organizational Psychology*.
Address: Department of Management & Organizations, W252 PBAB, University of Iowa, Iowa City, IA 52242-1000, USA.
E-mail: Sara-Rynes@uiowa.edu