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Women as Managers and Partners: Context Specific Predictors of Turnover in International Public Accounting Firms

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SUMMARY

Despite the controversy regarding "glass ceiling" effects for women and the specific concern expressed by large CPA firms about their inability to retain women in senior positions, there is little empirical evidence regarding why women partners and managers leave public accounting. In this study we examine factors potentially associated with the actual turnover decisions for a large sample of auditors who were managers or partners in large CPA firms. Public accounting-specific latent variables are developed to capture four critical aspects that affect turnover in public accounting: (1) competitive environment, (2) work/non-work obligations, (3) internal/external control and supervision, and (4) litigation risk. Women differ fundamentally on the work/non-work obligations dimension. Women who leave the employ of an auditing firm are significantly less likely to be re-employed in public accounting compared to their male counterparts. Additionally, women who do remain in public accounting, post-separation, are more likely to work for smaller firms.

Key Words: Gender, Turnover, Women managers, Women partners.

Data Availability: The data on which this study relies are available from the authors contingent on the permission of the public accounting firms who provided us access.

In recent years there has been much discussion about gender effects and the so-called "glass ceiling" for women in public accounting as elsewhere (e.g., AICPA 1994; Brett and Stroh 1994; Foster 1995; Lehman 1992; Naff 1994; Powell and Butterfield 1994; Reed et al. 1994; Tharenou et al. 1994). One specific concern related to the general controversy is the inability of large CPA firms to retain as many partners and managers as desired (e.g., Alter 1991; Hooks and Cheramy 1989; Parent et al. 1989; Pillsbury et al. 1989; Schwartz 1996). This inability is important for two reasons. First, turnover can be costly in terms of public relations, additional training requirements, and a reduction in the quality of auditing due to a loss of expertise (Hill, Metzger and Wermert 1994). Second, the inability to retain a sufficient number of women in senior positions will obviously deter firms' goals of a gender-diverse workplace.

Even so, no studies were identified that provided large-sample, systematic evidence using actual employee turnover and accounting-context predictors to explain differences by gender in partner and manager turnover for Big 6 firms.

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The majority of prior studies dealing rigorously with CPA turnover have either not explicitly examined gender using accounting-context variables or have operationalized turnover as "intent to turnover" or one of its variants (Maupin and Lehman 1994; Quarles 1994; Reed et al. 1994). Recent research in fields other than public accounting indicates that intent to turnover may not adequately capture actual turnover behavior (Kirschenbaum and Weisberg 1994; Tett and Meyer 1993).

This study explicitly addresses why women partners and managers leave public accounting as compared to their male counterparts. Four public accounting-specific latent variables representing critical aspects of the contemporary public accounting environment believed to be associated with partner/manager turnover in large CPA firms are examined. These variables were developed principally through discussions with experienced practitioners and from assertions contained in the business practice literature. Because of the dearth of theory and prior empirical research in the area of actual partner and manager turnover in CPA firms, there is little theoretical foundation upon which to base predictions of differential effects of factors potentially related to turnover by gender. Yet, if progress is to be made in reducing the turnover of women in senior positions in large CPA firms, some understanding of these differential effects appears to be essential. Consequently, this research, though exploratory in nature, fills a void in the audit and accounting literature, and has direct implications for practice.

The four latent variables include: (1) the perceived competitive environment in which public accounting firms operate, (2) work and non-work obligations of partners and managers, (3) the perceived internal and external control existing in the workplace, and (4) the level of perceived litigation risk in the work environment. These latent variables are formed from questionnaire data collected from a random sample of 205 former partners and managers who left large CPA firms during the period 1990–1993. Once the psychometric properties of these scales are assessed through structural equations confirmatory factor analysis, the full model, including relationships among these constructs and gender, and gender and certain post-separation outcomes (i.e., whether departees remain in public accounting; whether departees who do remain in public accounting remain in the Big 6 accounting firms) is tested in a path analytic structural equations model. The results indicate that, although all four factors appear to be associated with partner/manager turnover, only one of the four factors, work/non-work obligations, is significantly related to gender. This provides evidence that somewhat gender-unique work/non-work pressures, often anecdotally attributed to women, are related to their decisions to leave public accounting to a significantly greater extent than those of their male counterparts (e.g., Owen 1991). Further underscoring this finding are the additional discoveries that women who left senior positions in public accounting were significantly less likely to move to other positions in public accounting or to take positions with other large CPA firms.

This study proceeds as follows. The second section reviews relevant prior research on turnover in general and turnover in CPA firms in particular. The third section discusses the work environment in large public accounting firms and explains the four latent variables. The fourth section discusses the sample and method followed by a presentation of the results. The study concludes with a discussion of the results, implications for the turnover of women partners and managers, and the need for future research.

RELEVANT PRIOR RESEARCH

There is a distinguished tradition of conceptual development and empirical research in organizational studies addressing employee turnover.[1] The majority of this work has a common thread: as turnover is a dysfunctional element in most organizations, efforts and resources should be marshaled to minimize its occurrence. At a general level, employee turnover is associated with a host of costs. These include, but are not limited to, separation pay, exit interviews, terminal vacation

[1] For reviews, see Cotton and Tuttle 1986; Dalton and Todor 1993; Hom et al. 1992; Mitra et al. 1992.

pay, certain fringe benefits, administrative costs, loss of productivity, overtime, training, recruiting, testing and screening.[2] The cost of replacing an experienced manager, for example, has been reported as 150 percent of a year's salary (Schwartz 1996).

For public accounting firms, there has been recent discussion about the specific impact of turnover on relationships with clients. Berton (1994), reports that audit clients—particularly relatively small clients—have expressed grave concerns about the quality of auditing services provided because of turnover among those handling their accounts. This echoes an earlier concern expressed by Waller (1985) that employee turnover can result in decreases in client goodwill. Hill, Metzger and Wermert 1994) discuss the social costs of turnover in terms of higher audit costs and lower audit quality associated with the loss of highly-trained personnel.

Interestingly, while there is an extensive organizational literature on employee turnover and its relationships with a wide array of variables, similar work in the public accounting context (for inclusive reviews, see, Dillard and Ferris (1989) and Gregson (1992)) has focused largely on the relationships between employee attitudes.[3] The majority of this work, however, does not rely on actual employee turnover as the dependent variable. Instead, the variable of interest is "intent to turnover" or a variant (intent to quit, intent to leave, intent to remain). This reliance on "intent" to behave in some way as compared to actually having done so is not unique to the accounting-based literature but appears routinely in organizational research.[4]

There is, however, a potential risk associated with the choice of an intent variable. Presumably, its use is justified by some confidence that intent is a reasonable surrogate of the actual behavior. Minimally, then, one would expect a relatively high correlation between these variables. Recent work, however, suggests that this confidence may be misplaced. Tett and Meyer (1993, 280) concluded that their meta-analysis "calls into question the use of intention/cognition measures as surrogates of actual turnover." Kirschenbaum and Weisberg (1994), too, found no relationship between intent to leave and actual turnover. Two other meta-analyses reported intent to turnover and actual turnover to be related in the .3 range (Hom et al. 1992), but these levels "suggest limits in intent to quit as a surrogate of turnover" (Tett and Meyer 1993, 286).

The body of accounting-based research dedicated to employee turnover, or intent to leave, has rarely considered gender as a variable. Indeed, a comprehensive review of studies of individual behavior in professional accounting firms does not include gender in its model of factors influencing such behavior (Dillard and Ferris 1989). This was not the choice of the authors; rather, this gender variable could not have been included because the extant literature at the time of their review did not include this variable. Subsequent to this review, there are a few examples that do rely on gender as an explanatory variable. Gregson (1990) and Maupin and Lehman (1994) studied gender differences with aspects of satisfaction. Sheridan (1992) included gender in his studies of organizational culture and retention, and his survival model of accounting firm employees. In neither case, however, was gender the focus of his work. Collins (1993) specifically examined gender differences in stress and subsequent departure of those in the public accounting profession. Also, Hooks et al. (1994) reported that gender is a significant variable in determining individual partners' strategies for CPA practice development (e.g., making and developing contacts).

The AICPA (1994) has recently pubished *Survey on Women's Status and Work/Family Issues in Public Accounting*. The purpose of the survey was to "determine the existence of 'family-friendly' policies within public accounting firms and to gather quantitative human resources data on men and women in

[2] See Cascio (1991) for an excellent treatment of these issues and others.

[3] See, for example, satisfaction, commitment and turnover (Bline et al. 1991; Bullen and Flamholtz 1987; Bullen and Martin 1987; Dean et al. 1988; Gregson 1990, 1992; Maupin and Lehman 1994; Quarles 1994; Reed et al. 1994; Snead and Harrell 1991).

[4] See, for example, Begley and Czajka 1993; Blau 1993; Guzzo et al. 1994; Hunt and Morgan 1994; Kirschenbaum and Weisberg 1994.

the accounting profession." Unfortunately, the study did not distinguish Big 6 firms. The issues and pressures at the largest firms may be different than other firms because they focus more on auditing, are subject to larger litigation risks, and promote a smaller proportion of females to manager and partner ranks (AICPA 1994, 15).The dearth of empirical work in this area is surprising. Given the concern about diversity issues in the workplace, sentiment for a "glass ceiling" phenomenon (e.g., Dalton and Kesner 1993; Mainiero 1994; Sharpe 1994), and what has been described as "corporate flight of women managers," (e.g., Hooks and Cheramy 1994; Rosin and Korabik 1991; Schwartz 1989), more formal attention to differential factors affecting the loss of women in Big 6 public accounting firms is warranted.

The question of whether men or women leave the employ of large scale CPA firms at different rates is, as a practical matter, rarely at issue. Arguably, the pressing issue is not that they may quit more often, but why they do so (e.g., Rosin and Korabik 1995). Consider, for example, the empirical work examining whether women have a tendency to leave organizations at a greater rate than male counterparts (e.g., Barkman et al. 1992; Light and Ureta 1992; Miller and Wheeler 1992; Rosin and Korabik 1990, 1991, 1995; Tyrrell 1990; Weisberg and Kirschenbaum 1993; Wright 1988). Suppose it could be demonstrated that women are more likely to quit their employment than men in comparable positions. The value of this information is indirect. Presumably, no responsible organization would deliberately reduce the proportion of women hired in order to address this issue, as to do so would constitute an egregious violation of the Civil Rights Act. Suppose it could be determined that turnover rates differ on the basis of marital status, age, religious preferences, number of dependents or any of a myriad of such factors (see, e.g., Dalton 1995; Dalton and Todor 1993; Hom et al. 1992). For an organization to act on any of this information in order to manage its employee turnover levels is illegal for most of these factors, and ill-advised for the balance. Information on disparate rates of turnover by gender, however, may properly signal the need for intervention, i.e., the development of a means by which such disparate rates might be addressed post-hiring.

This leads to another consideration of the extensive accounting-based empirical work addressing the relation between various aspects of employee attitudes (e.g., satisfaction, commitment) and employee turnover. As noted previously, such inquiries are more likely to have been focused on these attitudes and intent to leave. Recent discussions and reviews regarding these alleged linkages have questioned the robustness of relations of this type on several levels (Dalton 1995; Dalton and Mesch 1990; Dalton and Todor 1988, 1993).

Stronger relationships with employee turnover and absenteeism are evident when examining situation-centered rather than person-centered explanations (e.g., Bartol 1979; Dalton and Mesch 1990, 1991, 1992; Dalton and Todor 1988; Rosin and Korabik 1995; Wanous et al. 1979). Organizationally related variables (e.g., environment, inducements, sanctions) are far better predictors as compared to those on an individual level (e.g., satisfaction, commitment, age). This may be, in part, because the attitudinal variables are more diffuse or indirect. Some persons may not be satisfied or are characterized by low commitment. That sentiment, however, may be driven by their view of the work environment or the inducements they receive. A review of the extant literature regarding turnover in accounting reveals that the studies are infrequently context-specific and often focus on subjects who left public accounting early in their careers. They rarely address factors that are unique—or at least prevalent—in the contemporary public accounting environment using subjects who formerly held senior-level, particularly partnership, positions with their firms.

VARIABLES ASSOCIATED WITH TURNOVER IN CPA FIRMS

There is a rich tradition of research both in the general area of employee turnover and that of gender issues in the workplace. There is an extensive literature, for example, examining the relationships among employee attitudes (e.g., job satisfaction, employee commitment) and turnover (for reviews and recent empirical assessments, see, e.g., Gregson 1992; Jaros et al. 1993; Maupin and Lehman 1994; Reed et al. 1994; Russ and McNeilly 1995). That lower levels of job satisfaction and commitment are associated with higher levels of employee turnover is evident from these data.

There is also an imposing empirical literature specifically addressing the differential rates of employee turnover as a function of gender (for an outstanding review, see Brett and Stroh 1994; see also, Miller and Wheeler 1992; Reed et al. 1994; Stroh et al. 1992; Weisberg and Kirschenbaum 1993). Further, a well documented literature exists indicating that women are more likely to be disadvantaged in areas of work/non-work conflicts (for a review, see Watkins and Subich 1995; see also, Frone et al. 1992; Offermann and Armitage 1993; Schneer and Reitman 1993). Collins (1993) (see also, Collins and Killough 1992), in a study of those in public accounting at the senior or manager level, reported that job-related tension was a factor in the separation of women. One factor in the source of this tension was the balance of responsibilities and time constraints in and outside the workplace.

The extant literature suggests that lower levels of job satisfaction and commitment are associated with employee turnover. Differential rates of turnover for men and women have been demonstrated; work/non-work conflict may be one factor that is more influential for the separation of women than men in decisions to leave their employment. Our objective in this study is to extend this work specifically to the context of managers and partners in the employ of the Big 6 auditing firms. As importantly, this study was designed to fit in the context of the dynamic environment which is prevalent for that industry.

With the assistance of experienced partners and managers currently or formerly employed by large CPA firms, accounting-specific latent variables were developed to capture four critical aspects of the contemporary public accounting environment: *competitive environment, work/non-work obligations, internal/external control and supervision*, and *litigation*. Also examined were two aspects of departees' employment after leaving these CPA firms: whether they remain associated with public accounting and, assuming they remain in public accounting, the size of the firm with which they were employed after leaving their previous firm. The two main research issues are whether the four variables have a differential impact on turnover decisions by gender, and whether these effects, if observed, may be differentially conditioned on two additional aspects of the employee relationship. First, is position (manager or partner) immediately prior to separation related to departees' perceptions of these critical environmental factors? Second, does the subjects' area of practice (e.g., auditing, consulting, tax) condition their reactions to the environmental demands?

The Public Accounting Work Environment

The prevailing work environment in public accounting in general and in large CPA firms in particular has been described as highly competitive, driven by extreme work pressures, characterized by an increasingly hostile internal/external control and supervision atmosphere in some instances, and fraught with personal legal risk (see, e.g., Berton 1991, 1994; Hill, Metzger and Wermert 1994). Based on discussions with senior public accountants, all of these factors are seen as likely to increase turnover.

Competition for clients among large CPA firms has grown increasingly intense over the past two decades (Hill, Ramsay and Simon 1994). The large number of corporate mergers and acquisitions during the 1980s reduced large CPA firms' potential client base and further fueled competition to the point that extensive and sometimes dramatic audit fee cutting and auditor switching have occurred (see, e.g., Berton 1991; Adams et al. 1987). This intense competition has resulted in considerable pressure being exerted on partners and managers to retain existing audit clients and develop new ones, and extends beyond the audit practices of these firms to tax and consulting as well. As audit fees have declined as a percentage of total revenues for large CPA firms, the firms have increasingly looked to these other areas of practice to help sustain the business (Nelson 1991).

Public accounting has long been known for its long hours and extensive work demands, especially during certain seasonal periods. Discussions with partners and managers indicate that it is not uncommon for auditors to work 60–80 hour weeks. This work often involves extensive travel, exacerbating the discommodious lifestyle prevalent in large CPA firms. Such intensive work commitments are likely to exert considerable pressure on many auditors, especially those with more extensive non-work obligations and force these CPAs to make difficult choices between careers with large public accounting firms and quality of life considerations (Carcello et al. 1991).

The public accounting profession is in a state of transition (e.g., Elliott 1994). Consequently, the internal/external control and supervision in large CPA firms is likely in transition as well. Such major transitions are rarely frictionless, and discussions with partners and managers indicate that public accounting is no exception. For example, three of the Big 6 firms have undergone major mergers within the past few years. Consolidating large organizations often leads to difficulties in integrating cultures and realigning hierarchies (Schweiger and Walsh 1990; Haspeslagh and Jemison 1991). Further, the aforementioned increased competition and subsequently discussed legal risk associated with the public accounting profession seem likely to be associated with a more tightly controlled work environment in order to manage the business problems posed by these factors. Tighter workplace rules and the ensuing reduction in professional autonomy are likely to make large CPA firms less desirable places to work (e.g., Begley and Czajka 1993; Cordes and Dougherty 1993; Sheridan 1992).

Public accounting, especially the large CPA firms, has been hit hard by increased legal risk over the past two decades resulting in what some have termed a legal liability crisis (see, e.g., Arthur Andersen & Co. et al. 1992; Hill and Metzger 1992; Hill et al. 1993). The Big 6 firms reported in 1994 that legal costs had more than doubled as a percentage of audit revenues over the past few years (*Public Accounting Report* 1994). Several large CPA firms have been forced to pay settlements in the hundreds of millions of dollars in conjunction with the S&L crisis alone (Hill, Metzger and Wermert 1994; Hill, Ramsay and Simon 1994). Since CPA firms have been traditionally structured as partnerships with unlimited personal legal exposure for partners, these rising legal costs have not only reduced partner income but in at least one case, Laventhol and Horvath, resulted in personal financial devastation for partners (Hill and Metzger 1992).

Although managers are not subject to personal legal liability for the acts of the partnerships for whom they work, future legal risk can be an important consideration in deciding whether to remain in public accounting and attempt to achieve partnership status. According to some of the partners and managers with whom this concern was discussed, there have been instances of partnership offers being refused, based on concern over personal legal risk.[5]

Research Questions

Consideration of the foregoing discussion leads directly to the following set of research questions addressing how women CPAs might be differentially affected by the four factors discussed in the previous subsection compared to their male counterparts:

> **Research question 1:** Do women departees report that the competitive environment was a more important factor in their decision to leave the firm?

> **Research question 2:** Do women departees report that work/non-work obligations was a more important factor in their decision to leave the firm?

> **Research question 3:** Do women departees report that internal/external control and

[5] Although fairly recent changes in laws to permit CPAs to create limited liability professional corporations have somewhat reduced this exposure, such protection does not completely resolve the concern over personal legal risk due to a complex set of considerations, such as retroactive liability and differences in law across jurisdictions. Further, partners in Big 6 firms during the period of this study were all subjected to personal legal risk resulting from acts of their partnerships.

supervision was a more important factor in their decisions to leave the firm?

Research question 4: Do women departees report that the litigation risk was a more important factor in their decisions to leave the firm?

These questions are not posed as formal hypotheses. While there is some literature which provides rationale for these research questions, there is little guidance concerning whether senior women in public accounting, given their experience and success evidenced by their partner or manager status, will react differently to these environmental factors than their male counterparts.

If women partners and managers are differentially affected by the foregoing concerns, then their post-separation employment might be substantively different from that of their male counterparts. For example, if women are adversely affected by one or more of these factors to a greater extent than men, they are unlikely to resolve their problems by simply moving to different Big 6 employers. Accordingly, women may be less likely than men to seek employment in Big 6 public accounting firms. Moreover, women may be less likely to remain in public accounting, irrespective of the size of the firm.

Research question 5: Are women, post-separation, less likely to be employed in public accounting?

Research question 6: Are women, if employed in public accounting post-separation, less likely to be employed by the Big 6 accounting firms?

A full model of the relationships suggested by the research questions is illustrated by figure 1. In this model, a series of items (described in a subsequent section) comprise the constructs of interest (competitive environment; work/nonwork obligations; internal/external control and supervison; litigation risk) referred to in the first four research questions. All of these constructs, then, are posited to be differentially related to gender. The final portion of the model establishes the suggested linkages between gender and the propensity to remain in the public accounting profession post-separation or to remain in a Big 6 firm post-separation.

METHOD

This section discusses the development of the questionnaire used to collect the data, and the sample and sampling process. It concludes with the definitions of the additional variables used in the analyses.

Questionnaire Development

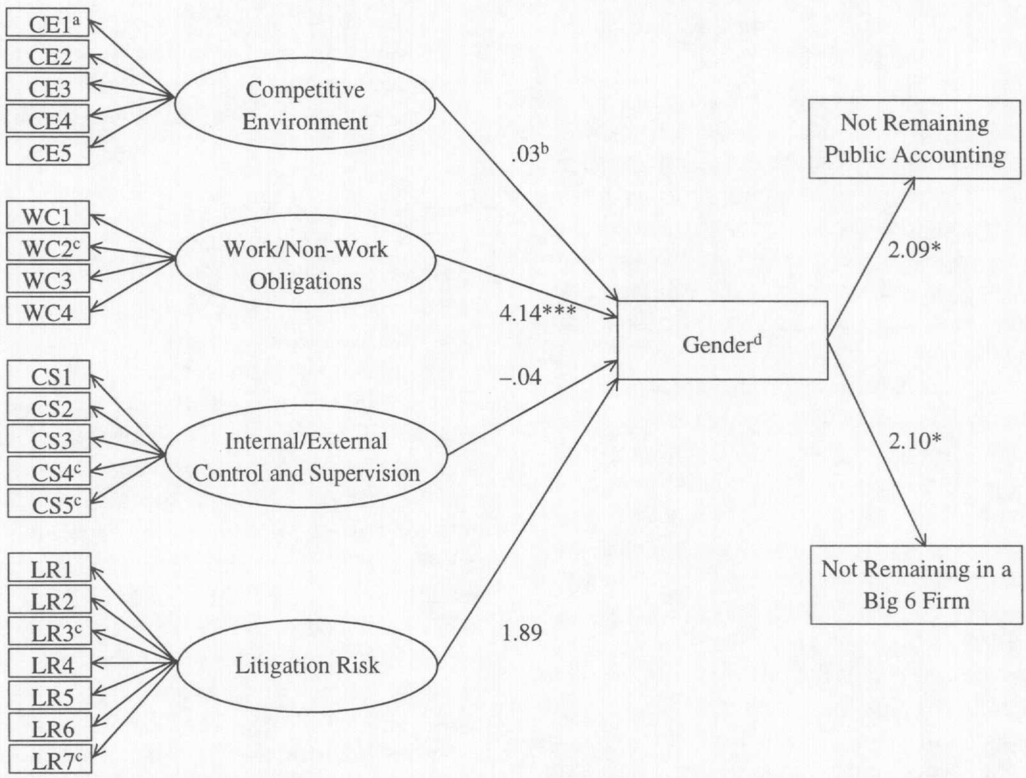
Four interval-level, latent variables were developed to capture the four critical aspects of the contemporary public accounting environment discussed in the previous section. Then, several questions were developed which, in concert, might capture elements of each latent variable. The initial questions for the latent variables were reviewed by current and former partners and managers from all Big 6 firms. Two drafts of the questionnaire were circulated to representatives of each of the Big 6 firms for their critique. Accordingly, the initial sets of items were modified. The development and properties of these scales are described in the following section. There are also two additional items capturing the departees' employment after leaving the firm, both of which are dichotomous: "While I am currently employed, I am no longer associated with public accounting;" and "While I am currently employed in a public accounting capacity, I do not currently work for a Big 6 accounting firm."

Sample and Sampling Process

The sample consists of 205 partners and managers who left the employ of the six largest public accounting firms and their predecessor firms prior to mergers during the period 1990–1993.[6] Lists were provided by each of the Big 6 firms of all partners and managers who had voluntarily left the offices of these firms in six major, geographically dispersed U.S. cities. Approximately 7,000 names were contained in the lists. A random sample of 952 names was taken from the lists for questionnaire mailing.

[6] These CPA firms are Arthur Andersen & Co., NA, Coopers & Lybrand, Deloitte & Touche, Ernst & Young, KPMG Peat Marwick, and Price Waterhouse.

FIGURE 1
Full Model of Construct, Gender and Outcome Relationships
Results of Structural Equations Analysis



[a] CE1–CE5 indicates Competitive Environment, items 1–5. Similar notation is used throughout the model.
[b] Entries on paths are T-values.
[c] Indicates items not included in the final model (see table 2, panels A–D).
[d] Gender is actually an indicator variable. This model does not imply that the latent variables determine a person's gender. Rather, the model suggests that the latent variables are differentially perceived as a function of gender and these perceptions, then, lead to different outcomes (i.e., not remaining in public accounting, not remaining in Big 6 firms).
* ** *** $p < .05$, $p < .01$, $p < .001$, respectively

The questionnaires were anonymous to encourage an acceptable rate of return and to ensure integrity of the responses due to the sensitive nature of the employment relationship. Total returns of 228 questionnaires resulted in a response rate of approximately twenty-four percent and 205 usable responses. A substantially larger percentage of the respondents came from the three largest of the six firms. This would be expected as the larger firms did have far more individuals who had left the firm over the period. Because of differences in mail delivery times and especially that a number of respondents had changed addresses more than once since departing their former CPA firms, tests of response bias using the interval between mailing and receipt of response are considered infeasible.

Definitions of Additional Variables

In addition to the scale data, the following additional variables are used in the analyses:

Gender—The gender of all departees is a dichotomous variable having a value of 1 if the respondent was female and 0 if the respondent was male.

Position—Whether the employee was a manager or a partner in the firm at the time of departure is a dichotomous variable having a value of 1 if the respondent was a partner and zero if the respondent was a manager at the time of the turnover.

Area of Practice—It was also noted whether an employee was in the auditing, consulting, or tax practice at the time of departure. An "other" category was also provided. For analysis, however, this was recoded to a dichotomous variable having a value of 1 if the respondent was an auditor and zero otherwise.

ANALYSES AND RESULTS

Using the questionnaire data, a three-step approach is taken to answer the research questions posed in the previous section. First, it is substantiated through descriptive statistics that each of the four latent variables is associated with many partners' and managers' turnover decisions. Second, structural equations modeling is used to provide a confirmatory factor analysis of the four proposed constructs of interest to this research (i.e., competitive environment; work/non-work obligations; internal/external control and supervision; litigation risk) and to simultaneously test the full model of relationships suggested by research questions one through six as illustrated in figure 1. Third, as three dichotomous variables (gender, remain in public accounting, remain in Bix 6 firm) are relied on in the full structural equations model, alternative analyses are also provided to independently assess the six research questions. Results and analyses are described in the following three subsections.

Descriptive Evidence of Factors Related to Turnover

Table 1 reports descriptive evidence of the association between actual partner and manager turnover and the four latent variables posed as turnover factors. The table reflects the percentage of respondents providing an affirmative answer to each of the questions in each scale, separated by gender and by position. It also shows the numbers of respondents by gender and position.

The table shows that substantive percentages of respondents indicated that the questions associated with each of the latent variables factored in their decisions to leave their former employers. This provides support for the importance of the four latent variables in explaining partner/manager turnover in the Big 6 firms during the study period.

Confirmatory Factor Analyses

Consistent with the guidelines suggested by Anderson and Gerbing (1988), an initial assessment of the confirmatory factor analysis of the constructs is provided prior to evaluating the complete model. Table 2, panels A–D (far left column) illustrate the individual items relied on to comprise the constructs. These sets of items were subjected to confirmatory factor analysis (maximum likelihood) for the initial data testing (four factors, items as indicated) using LISREL 8.03 (Joreskog and Sorbom 1993). The portions of table 2 designated as "Full Model" provide the parameter estimates, error variance and R^2 for each item of the latent variables.

The first step is the assessment of fit for the four-factor model.[7] In this step, the items which comprise the four latent variables are identified and a confirmatory factor analyses is run to simultaneously assess the robustness of the model. An adequate or better model would indicate four factors with the items loading reasonably on the latent variables as specified. Moreover, there would be no cross-loadings. A Chi-square of 581.53 with 183 degrees of freedom indicates that the initial fit is not acceptable. Also, the comparative fit index (CFI) and the incremental fit index (IFI) were .88, both below

[7] This confirmatory factor analysis step, sometimes referred to as the measurement model, involves a sample size of 205 for the assessment of 20 variables, a ratio of just over 10:1, more than adequate for an analysis of this type (e.g.,Tabachnick and Fidell,1996, especially chapter 14).

TABLE 1

Percentage of Respondents Providing an Affirmative Answer[a]

	Females			Males			
	Partner	Manager	Total	Partner	Manager	Total	Total
Competitive Environment:							
1. The accounting profession is much more competitive than when I first entered it	37.5	30.4	31.5	33.8	44.6	40.1	37.1
2. Competitive bidding for clients is far more common than when I entered the accounting profession	37.5	43.5	42.6	44.6	47.8	46.5	45.5
3. I felt increasingly more responsible for generating billable hours	62.5	63.0	63.0	38.5	60.9	51.6	54.5
4. The pressure to generate new clients	62.5	58.7	59.3	43.7	51.6	48.4	51.2
5. My firm was forced to set fees below costs to secure new clients	50.0	45.7	46.3	26.2	33.7	30.6	34.6
Work/Non-Work Obligations							
1. The number of hours I was expected to work	37.5	71.1	66.1	18.2	48.9	36.1	45.0
2. The increasing commitment necessary for the maintenance of continuing clients	37.5	34.8	35.2	10.6	27.5	20.4	24.2
3. I increasingly felt unable to satisfactorily meet my off-job commitments	50.0	71.7	68.5	25.8	44.6	26.7	44.8
4. I was no longer able to balance the rewards associated with this profession with its personal costs	75.0	82.6	81.5	48.5	67.4	59.5	65.1
Internal/External Control and Supervision							
1. The increasing potential for governmental regulatory intervention	12.5	6.7	7.5	17.2	11.0	13.5	12.1
2. The increasing scrutiny of virtually every aspect of public accounting	12.5	8.7	9.3	32.8	17.6	23.9	20.1
3. Much closer supervision, complex reporting requirements, and related quality controls by the firm itself	12.5	15.2	14.8	22.2	20.9	21.4	19.7
4. The loss of professional autonomy	37.5	23.9	25.9	40.6	25.3	31.6	30.1
5. My increased responsibility in the area of quality control for the work of others	0.0	10.9	9.3	10.9	16.5	14.2	12.9

(Continued on next page)

TABLE 1 (Continued)

	Females			Males			
	Partner	Manager	Total	Partner	Manager	Total	Total
Litigation							
1. The threat of litigation	50.0	19.6	24.1	29.7	20.9	24.5	24.4
2. The costs of litigation depressed profits	62.5	17.4	24.1	43.7	36.2	39.4	35.4
3. The ongoing costs of litigation would continue to depress profits	62.5	21.7	27.8	48.4	38.5	42.6	38.8
4. That I might have personal liability for litigation damages against the firm	50.0	23.9	27.8	31.2	26.4	28.4	28.2
5. That the firm may have insufficient liability insurance coverage to indemnify its employees in the case of litigation	37.5	8.6	13.0	23.4	15.4	18.7	17.2
6. The risk of litigation is causing competent persons to leave public accounting	50.0	17.4	22.2	40.6	34.1	36.8	33.0
7. The threat of litigation leads to over-auditing	12.5	11.1	11.3	29.7	25.3	27.1	23.1
Number of Respondents	8	45	53	64	88	152	205

All items, in 7-point Likert format, were preceded by "Please indicate the extent to which you agree that the following were factors in your decision to leave the firm."

[a] All items were actually displayed in a 7-point Likert format. The truncation of the descriptive data reported here to the percentage of affirmative answers is for ease and efficiency of presentation. All analyses were based on the 7-point format.

TABLE 2
Items and Properties of the Latent Variables[a]

Panel A: Competitive Environment

	Full Model			Trimmed Model		
	Parameter Estimate	Error	R^2	Parameter Estimate	Error	R^2
Please indicate the extent to which you agree that the following were factors in your decision to leave the firm:						
1. The accounting profession is much more competitive than when I first entered it	.81	.34	.66	.83	.31	.69
2. Competitive bidding for clients is far more common than when I entered the accounting profession	.85	.28	.72	.92	.15	.85
3. I felt increasingly more responsible for generating billable hours	.85	.27	.73	.84	.29	.71
4. The pressure to generate new clients	.79	.37	.63	.79	.38	.62
5. My firm was forced to set fees below costs to secure new clients	.57	.68	.32			
	Composite Reliability = .89 Variance Extracted Estimate = .61			Composite Reliability = .90 Variance Extracted Estimate = .68		

Panel B: Work/Non-work Obligations

	Full Model			Trimmed Model		
	Parameter Estimate	Error	R^2	Parameter Estimate	Error	R^2
Please indicate the extent to which you agree that the following were factors in your decision to leave the firm:						
1. The number of hours I was expected to work	.80	.36	.64	.79	.37	.63
2. The increasing commitment necessary for the maintenance of continuing clients	.67	.55	.45			
3. I increasingly felt unable to satisfactorily meet my off-job commitments	.88	.23	.77	.89	.20	.80
4. I was no longer able to balance the rewards associated with this profession with its personal costs	.75	.43	.57	.75	.43	.57
	Composite Reliability = .86 Variance Extracted Estimate = .61			Composite Reliability = .85 Variance Extracted Estimate = .66		

Panel C: Internal/External Control and Supervision

	Full Model			Trimmed Model		
	Parameter Estimate	Error	R^2	Parameter Estimate	Error	R^2
Please indicate the extent to which you agree that the following were factors in your decision to leave the firm:						
1. The increasing potential for governmental regulatory intervention	.75	.44	.56	.78	.40	.66
2. The increasing scrutiny of virtually every aspect of public accounting	.81	.34	.66	.87	.24	.76

(Continued on next page)

TABLE 2 (Continued)

Panel C: Internal/External Control and Supervision (Continued)

	Full Model			Trimmed Model		
	Parameter Estimate	Error	R^2	Parameter Estimate	Error	R^2
3. Much closer supervision, complex reporting requirements, and related quality controls by the firm itself	.80	.37	.63	.87	.24	.76
4. The loss of professional autonomy	.58	.67	.33			
5. My increased responsibility in the area of quality control for the work of others	.56	.69	.31			
	Composite Reliability = .83 Variance Extracted Estimate = .50			Composite Reliability = .83 Variance Extracted Estimate = .62		

Panel D: Litigation

	Full Model			Trimmed Model		
	Parameter Estimate	Error	R^2	Parameter Estimate	Error	R^2
Please indicate the extent to which you agree that the following were factors in your decision to leave the firm:						
1. The threat of litigation	.82	.33	.67	.82	.33	.67
2. The costs of litigation depressed profits	.96	.09	.91			
3. The ongoing costs of litigation would continue to depress profits	.96	.08	.92			
4. That I might have personal liability for litigation damages against the firm	.80	.37	.63	.87	.24	.76
5. That the firm may have insufficient liability insurance coverage to indemnify its employees in the case of litigation	.74	.45	.55	.87	.25	.75
6. The risk of litigation is causing competent persons to leave public accounting	.80	.35	.65	.84	.29	.71
7. The threat of litigation leads to over-auditing	.58	.66	.34			
	Composite Reliability = .87 Variance Extracted Estimate = .63			Composite Reliability = .93 Variance Extracted Estimate = .67		

[a] All items were presented in a 7-point Likert-type format.

the .9 minimum guideline. Through a routine iterative procedure, however, the patterns among parameter estimates, error variances and R^2s can be assessed to determine which of the items may be profitably removed from the latent variables. In general, the contribution of any given item to a latent variable would be suspect if the parameter estimate were low, the error variance high (particularly if it exceeds the parameter estimate), and the R^2 were low. Such items not only jeopardize the psychometric properties of the relevant latent variable but adversely affect the fit of the overall model. Also, an inspection of the path diagram (individual items to construct) will indicate cross-loaded items; the inclusion of such items may not necessarily affect the robustness of a given latent variable but will almost certainly result in a poorer overall model.

The sections of table 2 designated "Trimmed Model" indicate the adjustments made based on the previously described indicators. Notice, for example, the "Competitive Environment" latent variable (panel A). The latter item, "My firm was forced to set fees below costs to secure new clients," was characterized by a poor pattern of parameter estimate error and R^2. Accordingly, the trimmed model does not include this item. Similar procedures were followed for the latent variables represented in panels B, C and D.

Each table includes the composite reliability of the latent variable and its variance extracted estimate. The composite reliability (reliability of the latent variable) is calculated by squaring the sum of the factor loadings and dividing by that value plus the sum of the error variances (Bagozzi 1980). This statistic is interpreted as one might interpret a coefficient alpha, with .7 considered a reasonable guideline (Nunnally 1978). The variance extracted estimate is derived by summing the squared factor loadings and dividing by that value plus the sum of the error variances. A minimum guideline for this indicator is .5.

As is evident in table 2, both the composite reliability and variance extracted estimates are improved by the deletion of relatively poor individual items. Indeed, for every latent variable, these reliabilities are well above acceptable guidelines. At this point, the fit of the revised model (i.e., the four-factor model that does not include the poor items) can be assessed. The resulting model is greatly improved. The Chi-square is 114.97 with 59 degrees of freedom. The CFI and IFI are .97, indicating a very robust model.

Structural Equations Analysis of the Full Model

Figure 1 provides the results of a full model in which all six research questions are simultaneously assessed. The structural equation analysis of the overall model is robust with both the comparative fit index (CFI) and the incremental fix index (IFI) at .94. Individual research questions can be addressed by attention to the individual paths in the full model. Research questions one through four addressed the possibility that women departees, as compared to their male counterparts, would report that the (1) competitive environment, (2) work/non-work comitment, (3) internal/external control and supervision, and (4) litigation risk were factors in their decision to leave the firm. Paths from the competitive environment, internal/external control and supervision, and litigation risk constructs to the gender variable ($t = .03, -.04, 1.89$, respectively) suggest that the female managers and partners are not significantly more sensitive to these workplace elements than their male counterparts. The work/non-work obligations and gender path, however, provides strong support ($t = 4.14$, $p < .001$) that women report that this construct is significantly more important, compared to men, in their turnover decisions.

Please note that in figure 1, the observed variable, "gender," is actually an indicator variable. The full model does not imply that the latent variables (i.e., competitive environment, work/non-work obligations, internal/external control and supervision, litigation risk) actually are factors in the determination of a person's gender. Rather the model suggests that the latent variables are differentially perceived as a function of partner/manager gender and these perceptions, then, lead to different outcomes (i.e., not remaining in public accounting, not remaining in Big 6 firms).

Research questions five and six address the nature of the work selected by departees after their separation. Specifically, the questions are whether women are more likely to leave public accounting post-separation and whether women are less likely to be employed by Big 6 accounting firms post separation. As illustrated in figure 1, both these paths are significant. Women are less likely to be employed in public accounting ($t = 2.09$, $p < .05$) and, if employed in public accounting, are less likely to be employed by Big 6 firms ($t = 2.10$, $p < .05$).

These results must be interpreted with some care. Three of the variables included in the full model are dichotomous (gender, remain in public accounting, remain in Big 6 firm). There is some controversy in the structural modeling literature about the interpretation of such models (for an excellent discussion, see, e.g., West et al. 1995; see also, Muthen 1993). One of the potential difficulties is that the direction of error that one might expect is not uniform. One effect, for example, that has been demonstrated when categorical variables are in a model, is that true models (i.e., acceptable models) are rejected. This would suggest that the use of dichotomous variables would under-estimate certain fit indices and, derivatively, the robustness of a model (West et al. 1995). Accordingly, these tendencies would lead to a conservative assessment of a model. Alternatively, however, nonnormality, often associated with categorical variables, can result in moderate to severe underestimation of the standard errors of parameter estimates. Such underestimation can produce significant paths and correlations between factors that do not, in fact, exist in the population (West et al. 1995). This, of course, will lead to a liberal interpretation of certain data.

In the interests of some conservatism, then, the next section provides alternative analyses of these data. To the extent to which the results derived from such analyses are essentially parallel to our structural equations model, results may be more confidently reported. Also, in the next section we report additional results which were not part of the initial model.

Alternative Analyses of the Data

Because the dependent variables are related at a statistically significant level, MANOVA is also used to analyze these data. Table 3, panel A shows the MANOVA results for the gender, position and gender/position interaction effect with the dependent variables. The multivariate significance (.02) indicates that overall levels of the dependent variables are differentiated by gender. A review of the step-down, univariate

TABLE 3

MANOVA— Competitive Environment, Work/Non-Work Obligations, Internal/External Control and Supervision, Litigation with Gender and Position and Area

Panel A: Position

Effects	Multivariate Significance	Dependent Variables (Univariate F-Tests)	F	Sig.
Gender	.02	Competitive Environment	.03	.86
		Work/Non-Work Obligations	8.87	.00
		Internal/External Control and Supervision	.21	.64
		Litigation	.18	.71
Position	.00	Competitive Environment	.84	.36
		Work/Non-Work Obligations	5.07	.03
		Internal/External Control and Supervision	.04	.85
		Litigation	3.75	.05
Gender × Position	.35	Competitive Environment	.00	.96
		Work/Non-Work Obligations	.25	.62
		Internal/External Control and Supervision	.81	.37
		Litigation	1.17	.28

Panel B: Area

Effects	Multivariate Significance	Dependent Variables (Univariate F-Tests)	F	Sig.
Gender	.00	Competitive Environment	.49	.49
		Work/Non-Work Obligations	19.01	.00
		Internal/External Control and Supervision	.07	.78
		Litigation	1.16	.28
Area	.66	Competitive Environment	1.40	.92
		Work/Non-Work Obligations	1.00	.26
		Internal/External Control and Supervision	.73	.63
		Litigation	1.29	.89
Gender × Area	.99	Competitive Environment	.00	.99
		Work/Non-Work Obligations	.05	.81
		Internal/External Control and Supervision	.00	.97
		Litigation	.00	.97

F-tests strongly suggests that this impact is largely attributable to differences in the work/non-work obligations variable. Indeed, on a five-point scale, the average for women for the extent to which the work/non-work obligations variable was a factor in their decision to leave the firm was 3.83 as compared to only 3.04 for their male counterparts. Table 3 also indicates that position has a statistically significant main effect as well. Once again, the step-down, univariate F-tests suggest that this impact is largely related to differences in work/non-work obligations and the litigation variables. The average for managers on the work/non-work obligations variable as a factor in their leaving was 3.01; for partners in these CPA firms, the average was 3.25. There is no evidence of a position by gender interaction affect.

Table 3, panel B illustrates a similar analysis for gender, area of practice, and the gender/practice interaction.[8] As would be expected, there is a main effect for gender and, relying on the step-down univariate F-tests, that result is attributable to differences in the work/non-work obligation variable. In this case, however, there is neither a main effect for area nor evidence for a gender by area interaction effect.

The question was also raised whether women who had left the CPA firms could be distinguished by alternative employment opportunities, post-separation, compared to their male counterparts. Would women, post-separation, be less likely to be employed in public accounting as compared to their male counterparts? A contingency analysis ($p < .05$) provides support for this hypothesis. Of the women departees, 28.7% are no longer associated with public accounting; this compares to 16.7% of the male departees. Further, whether women who were employed, post-separation, in public accounting were less likely to be employed by Big 6 accounting firms as compared to their male counterparts was examined. A contingency analysis ($p < .05$) also provides support for this contention. Of the women departees, 28.8% are in this category compared to 13.9% for their male counterparts. Note that there is virtually no difference in the percentages of men and women who were not employed in any capacity. At the time of the survey, 25.0% of the women were not employed as compared to 25.3% of the men.

In summary, those analyses relevant to the overall model, then, closely mirror those reported in the structural equations analyses. For only one of the constructs (work/non-work obligations) do women departees differ from their male counterparts. Also, women are less likely to be employed in the public accounting profession, post separation. Similarly, women, who do remain in public accounting, are less likely to be employed in Big 6 accounting firms.

DISCUSSION

Limitations

As with most studies, the results reported here must be interpreted with some care. First, since those who participated in this study were all employees of Big 6 accounting firms, findings may not be generalizable beyond those firms. This is underscored by the fact that many of the female managers and partners moved from Big 6 accounting firms to smaller accounting firms—possibly to ameliorate dissatisfying aspects of the Big 6 environment.

Also, our responses are self-reports. While there is no reason to believe that the respondents were less than candid, this may not be the case for each and every respondent. Most notably, there may be some demand characteristics regarding whether a given respondent was actually a voluntary separation. It could be that some respondents, while not actually terminated in the formal sense, were counseled out of their firms. The data to which there was access, archival as well as that derived from the survey, do not permit us to ascertain the extent to which respondents may not have answered accurately on this issue. Also, where some managers and partners may have been counseled out of their firms, it is not known to what extent women may have been so counseled more or less frequently than their male counterparts. Evidence demonstrating that women, in fact, are subject to "adverse counseling" more often than men

[8] In principle, gender, position, area and their interactions could have been assessed with a single MANOVA. Of the total sample of 205, 53 were women and 152 men. This proportion is entirely acceptable for analysis. The problem with reliance on a single MANOVA arises with the low cell counts involved in the three-way interaction for gender, position and area.

would certainly provide a radically different perspective on why women managers and partners are not retained at the same rate as their male counterparts.

As noted earlier, we also recognize some risk in not relying on "traditional" constructs to capture, for example, satisfaction, commitment, and work/non-work conflict. These relationships had been previously well explicated and examined in the relevant literatures. Moreover, such metrics were not context-specific to the accounting profession and its contemporary environment. The psychometric properties of our constructs provide some vindication for our approach. Moreover, the models in which these constructs were elements are robust. Also, the convergence of results from the structural equations modeling approach as well as the more traditional approaches increase confidence for our conclusions.

Implications

First, nothing contained in this research should be interpreted as an indictment of any public accounting firm nor its managers or partners, female or otherwise, currently or formerly in their employ. The challenge of retaining senior women is not specific to public accounting; rather disproportionate rates of career advancement, promotion and separation have been reported for female managers in both the private and public sectors, generally (Blum et al. 1994; Brett and Stroh 1994; Naff 1994; Newman 1993; Ohlott et al. 1994; Powell and Butterfield 1994; Schneer and Reitman 1995; Tharenou and Conroy 1994; Tharenou et al. 1994) and in other professions (e.g., Evetts 1993; Fisher et al. 1993; Foster 1995; Mattis 1994), domestically and internationally (e.g., Adler 1993; Melamed 1995). The possibility of stress associated with work/non-work conflict as a precursor of turnover in this sample of partners and managers in the Big 6 CPA firms has also been discussed. Such stress-related behaviors are, by no means, restricted to firms of this type (Offerman and Armitage 1993), neither specifically to women, nor to women currently or formerly employed in Big 6 CPA firms.

Still, the inability of large public accounting firms to retain women at more senior levels is cause for concern, particularly since it is service organizations and professional firms where the largest concentration of female professionals and managers are found (Mattis 1994). Not only can this inability lead to a reduction in the quality of auditing through the loss of highly-trained personnel, but it can also lead to difficulties in client relations. Further, assuming gender diversity is an objective of large CPA firms, the inability to retain women in senior positions obviously deters its attainment. Despite the seriousness of this issue, there is little research related to actual turnover of women managers and partners compared to their male counterparts. This study addresses this void by providing the first large-sample, rigorous empirical evidence of public accounting context-specific latent variables associated with the actual turnover of female versus male partners and managers in large CPA firms. Many observers would interpret the results of this study rather soberly.

Based on this sample of actual separations from large-scale public accounting firms, several conclusions may be drawn. First, although women and men do not differ substantially in the extent to which the competitive environment, internal/external control and supervision, and litigation affect their decision to leave their firms, women do differ fundamentally on the work/non-work obligations dimension. Second, there is no evidence that either position (i.e., manager or partner) or area of practice (e.g., auditing, consulting, tax) is a factor in this difference. Third, women who leave the employ of a public accounting firm are much less likely to be re-employed in public accounting as compared to their male counterparts. Fourth, women who do remain in public accounting, post-separation, are more likely to work for smaller firms.

For those who are, we believe rightfully, concerned about the retention of women in public accounting as well as their career progression, there is yet another aspect of this study which is potentially troubling. Much of the prior work examining turnover in the public accounting context has focused on employees in the earlier stages of their career. This is a legitimate concern as turnover in these earlier periods means that firms are not likely to recover their investment in the training and socialization of these employees. The focus of our research here, however, is on more senior employees. This should be particularly disquieting to the profession because, at this stage, some progress against "glass ceiling" effects will have been made.

The finding that all of the latent variables examined appear to have some consequential influence on turnover, but only one—work/non-work obligations—explains differences in actual turnover by gender has important implications for practice. Since women appear to differ from their male counterparts on only one dimension, this should provide some definitive guidance to large public accounting firms by indicating a single factor which appears to be most critical in driving the turnover of women in senior positions. By addressing the issue of work/non-work obligations and the conflicts arising therein, large CPA firms may be able to mitigate its impact and reduce the rate of turnover among women partners and managers. Academic research can further contribute to this effort by providing more specific direction to practice regarding the exact nature of the pressures that arise from conflicts over work and non-work obligations and actions that may be taken to mitigate these pressures. Further, by comparing the results of studies such as this which examine actual turnover in public accounting with those which examine intent to leave (e.g., Hooks et al. 1996), some basis may be formed for assessing the degree of convergence between these two dependent metrics in the public accounting setting.

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