Measuring Disclosure Content Within the MD&A: The Case of North Carolina Counties

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Audit implementation of Government Accounting Standards Board (GASB) 34 guidelines has yielded increased levels of disclosure content within local government comprehensive annual financial reports (CAFRs). Of particular interest is the Management Discussion & Analysis (MD&A) content that provides a prelude to primary statements establishing unit overall financial position. In this study, the level of disclosure content is measured using net position, fund balance, and organizational factors among all 100 North Carolina County governments for fiscal year 2019. The empirical analysis suggests that disclosure content within area of foci changes depending on increased audit fees, state designated tier level, specific departmental spending, and lengthier MD&As. Additional information illuminates a very limited auditor pool and some recalcitrance concerning service provision. Overall, the findings point to audit disclosure practices including the MD&A as being predicated on unit overall needs versus illumination.

Keywords: government accounting, MD&A, government audits

INTRODUCTION

State and local government financial reporting has improved substantially over the past twenty years due to the continuing improvements associated with Government Accounting Standards Board (GASB) Statement Number 34. Significant evidence of GASB 34 influence can be found within government comprehensive annual financial reports (CAFR). GASB 34 requires specific formatting of basic financial statements, most notably government-wide statements with accompanying accrual information inclusive of capital assets and long-term liabilities. Requirements also include required supplementary information, note disclosures and a narrative Management, Discussion & Analysis (MD&A) prior to the financial statements and in most cases, the government-wide statements. The disclosure information is designed to allow finance officers or designated officials the opportunity to present both a short and long-term outlook of government activities (GASB 1999, Cod. 2200.106; GASB 1999, Cod. 2200.109c). This allows stakeholders, especially investors, to have insight into the many activities which may have influenced the overall financial position of the unit, especially as it pertains to changes from the previous fiscal year (FY). The MD&A provides an initial view of the statements with a preliminary qualitative assessment of overall financial position with supportive tables. The goal of this study is to determine the level of reporting detail found within the MD&A by examining key factors that influence the financial performance of the unit.

Motivation for the study extends from the continual efforts to improve qualitative disclosures for state and local governments (GASB 2019; GASB 2021a; GASB 2021b). The analysis of this study attempts to extrapolate the relationships between quantitative and qualitative information from current disclosures and based on organizational influences, determine the actual level of transparency among MD&As. This information is very important for stakeholders since it provides an initial evaluation of the financial position of the unit with accompanying financial information. If further analyses are determined necessary, the stakeholders can evaluate the accompanying notes as well as the necessary financial statements.

This study contributes to the literature in many ways. First, it provides a detailed analysis of each county government MD&A within a state to determine the extent at which units not only follow GASB guidelines, but also the depth of disclosure information that is presented. Second, this study examines organizational and service factors that have a direct impact on the overall position of the unit versus the traditional litany of exogenous characteristics. Third, not only does the study consist of government MD&A analysis, but includes local government units that to this point, have experienced limited research exposure (Rich, Roberts, and Zhang 2016; Sacco and Bushee´ 2013; Guo et. al. 2009; Marsh, Montondon, and Kemp 2005). In addition, these units which consists of county governments exclusively, entail various population groups as well as units with diverse financial positions.

Additionally, this study provides users of CAFRs some type of framework to determine the level of disclosure as it relates to the key components of overall financial position for a unit: net position and overall fund balances. The study also examines additional external economic influences as determined by the preparer. Finally, the study demonstrates the influence of a very extensive state oversight process with a comprehensive policy for local government audit preparation inclusive of MD&A disclosure.

The study is organized as follows. First, there will be a literature review of studies that have examined the MD&A within government settings. Next, there will be a discussion of the North Carolina state oversight process and how it pertains to audit preparation. A model will then be introduced inclusive of the factors that are expected to influence MD&A disclosure. More in-depth models will be reported that further isolate key findings, and finally a discussion of the findings.

LITERATURE REVIEW AND HYPOTHSES MEASUREMENT

The transparency and comprehension of financial statements associated with the implementation of GASB 34 has been a primary focus of previous research (Lu 2007; Stalebrink 2019). Bloch (2016) surveyed members of the National Federation of Municipal Analysts to assess their perceptions of the GASB 34 reporting standards and overall effectiveness in disclosure reporting. Upon isolation of various components of the CAFR, the new reporting standards associated with the MD&A improved analysis between statements and especially in key areas and events that had an overall impact on the financial position of unit including various decision making.

The need for the progression of reporting has evolved due to the changing nature of government services and the need for infrastructure. Governments with an interest in obtaining some type of debt financing have an interest in quality disclosure practices with the highest level of position accuracy in order to offset higher borrowing costs (Baber and Gore 2008; Benson, Marks, and Ramam 1991; Fairchild and Koch 1998). Notwithstanding the Letter of Transmittal which can also provide substantial information concerning performance factors, the MD&A provides a more concise analysis of the unit although consistency across units vary considerably. This contrast was substantiated by Guo et. al (2009) in an examination of Florida municipalities. Variations of MD&A disclosure quality were reported although basic GASB 34 baseline requirements were consistent among units. More comprehensive MD&A disclosures had comparable municipal metrics and financial implications as a result of social and economic factors taking place at the regional as well as the national level. For larger governments, the level and type of staff involved in the audit process have a definite impact on audit quality as well as disclosure presentation (Modlin 2014).

Unit changes from the previous year is a key component within the MD&A (GASB, 1999, Cod. 2200.109c). Rich et. al (2021) found that from 2011-2015, the unemployment rate, fund balance levels from government funds, and auditor turnover all had an effect on content changes within the MD&A. Suggestions for the changes included a more comprehensive economic outlook based on demographic and fund balance changes to the newly contracted auditor desire for additional clarity. Previous studies had similar findings through content analysis. Rich, Roberts, and Zhang (2018) found that higher levels of unemployment, general fund deficits, and less intergovernmental funding are all associated with an increased level of negative tone within the MD&A. From a budgetary standpoint, elected officials at the local level have stated that intergovernmental funding and unfunded mandates can have a major impact on the outlook of an upcoming FY (Modlin 2008).

Auditor analysis of specific statements including the MD&A illustrate specific areas of focus upon determining generally accepted accounting principle (GAAP) compliance (Holder 2004). Most disclosure inconsistencies within CAFRs can be found among the government-wide statements as well as fund statements; however, disclosure issues are quite limited within the MD&A (Modlin 2012). Rich et. al (2021) provided some support for this finding as preparers in states without formal guidelines for MD&A preparation were more than likely to have additional content changes. The research has pointed to many instances in which stakeholder satisfaction becomes a primary outcome objective with narrative changes within the MD&A; however, the overall goals of the unit as related to service provision have to be taken into consideration suggesting that in some cases, the information provided could be a pacification for a tailored clientele.

Hypotheses

A variety of approaches have been taken in order to determine MD&A disclosure content that cover change rationales. The approach taken here is to examine a number of internal characteristics to determine the level of content within a MD&A. Four hypotheses have been developed to examine the level of content within the MD&A including (1) finance officer experience, (2) internal service factors, (3) auditor characteristics, and (4) external entity attributes.

The CAFR is a major responsibility within the finance department and the personnel involved have a substantial role in audit quality due to the numerous statement preparation activities. The finance officer, as head of the department, oversees this process and thus has substantial input into MD&A content. This content as well as the presentation is highly influenced by government service activities that take place during the course of the fiscal year including appropriation spending by departments with high levels of full-time equivalency (FTE) along with overall employer provided benefits.

Prior literature has also documented a number of auditor attributes related to government service acquisition. Changes in auditor leads to alternative approaches to the entire process from information gathering to potential changes in audit presentation. The effect on the MD&A could be an unintended consequence with a different perspective from external stakeholders due to a changed CAFR presentation. Resultants from these changes can have an impact on key economic classifications as well as bond rating.

H1: *Finance Officer experience influences MD&A level of disclosure content.*

States with a heavy financial oversight process usually have numerous indicators that isolate specific conditions that can lead to insolvency (Cahill & James 1992; Honadle 2003; Kloha, Weissert, and Kleine 2005; Coe 2007; Coe 2008). North Carolina has one of the most heavily regulated local government oversight processes in the country (Modlin 2010). Legislation drives the entire process including the appointment of a finance officer (N.C.G.S. 159-24 2019), the duties of the finance officer (N.C.G.S. 159-25 2021), the accounting system required (N.C.G.S. 159-26 2021), budgeting accounting for operations (N.C.G.S. 159-28 2021), and responsibility for the audit process (N.C.G.S. 159-34 2021).

Specified legislative requirements with this much detail emphasize the importance of the finance officer within the audit process as well as MD&A formulation. Experienced finance officers (FINEXP) are usually more positioned to have efficiency in the audit process. Incorrect reporting was found to be slightly higher in counties with finance officers with less experience (Rich and Zhang 2016; Modlin 2012). Reporting issues related to internal control quality within the unit can lead to higher municipal interest costs (Baber, Gore, Rich, and Zhang 2013; C. Edmonds, J. Edmonds, B. Vermeer, and T. Vermeer 2017). The importance of this role is elevated even further considering the county manager has limited involvement within the process (Modlin 2014).

H2: *Internal service factors influence MD&A level of disclosure content.*

Initial highlights among a MD&A of a local government unit will often defer to the current net position. A positive net position indicates that there is a sufficient coverage of liabilities. Depending on the specifics of information disclosure, officials will emphasize annual differentiation compared to the previous FY and the actual change in activity that precipitated the change (NETPOS). For instance, a significance increase in net position could be explained by the retirement of debt service that was associated with a specific construction project or the changing of apportionments during the FY due to spending inconsistencies by specific departments (DEPT) (Modlin 2019). Positive net positions are also not correlated with unreserved fund balance levels. Units with negative net positions can still have high levels of liquidity.

Local governments have different thresholds for defining capital projects (Modlin 2016A). Installment finance agreements (IP) are a method for governments of all sizes to obtain capital assets without the traditional use of debt service. Under North Carolina law, the title to the asset such as a car or the completion of a construction project such as a public school is titled to the government unit despite the timing of payable elimination (N.C.G.S. 160A-20 2017). In the case of public schools, the school system actually receives the title despite the county providing the proceeds. The lending entity is provided with a security interest until obligations are satisfied.

Internal personnel activities have significant impact on government operations. Female finance officers were more likely to ensure higher levels of employee benefits compared to their male counterparts (Modlin and Goodman 2018). This includes determining the best available insurance coverage (INSURANCE) at the lowest cost for current employees, financing for the unfunded liabilities associated with retirement such as the Local Government Employees' Retirement Systems (LGERS), Other Post-Employment Benefits (OPEB), and Law Enforcement Officer Special Separation Allowances (LEOSSA).

Geographical size of a local government service area (AREA) has an impact on costs, especially in relation to providing vehicles and manpower to meet service demands (Modlin 2018). In the case of North Carolina, the focus of this study, the state is responsible for public school construction as well as bus purchase and maintenance as well as traditional governmental services inclusive of social services, public health, and area transit systems which provide transportation for citizens with disabilities.

H3: *Auditor attributes influence level of MD&A disclosure content*

MD&A higher levels of disclosure content can be an indicator of higher quality. Higher audit quality has been linked to higher fees (AUDITFEE) compared to the utilization of a more renowned audit firm (Copley 1991). Higher quality perception has also been linked to auditor specialization (AUDITOR) rather than fees (Lowensohn, Elder, and Davies 2007). A more common finding has been the significant relationships between local government audit costs and government size (Baber, Brooks, & Ricks 1987; Rubin 1988; Copley 1989). Further isolation of costs has suggested the amounts of resources utilized during the process was the primary contributor (Johnson 1998; Johnson, Freeman & Davies 2003). For smaller governments with limited revenue streams, these costs can be a significant part of the annual budget and can have a separate line item.

H4: *External entities influence MD&A disclosure content*

A more detailed MD&A with elevated levels of disclosure demonstrate a higher level of transparency. The Government Finance Officers (GFOA) award for comprehensive annual financial reporting (CAFR) provides evidence of this clarity; however, units were charged increased fees that were associated with receiving this award when the auditor had to spend additional time and resources on audits in which the award was a factor (Johnson 1998).

Economic influences among the MD&A are usually an option for local government entities in North Carolina (N.C.G.S. 159). Counties usually emphasize bond ratings (BOND) early in the highlights section with more detail with the government-wide financial analysis. Counties with higher levels of debt service can engage in substantially more capital project endeavors with some counties exceeding $3,000 per capita and more than $1B in general obligation bonded debt and notes (N.C. State Treasurer Division of State and Local Government Finance 2020).

North Carolina also has legislation determining tier rankings for all 100 counties (N.C.G.S. 143B-437.08). The North Carolina Department of Commerce ranks counties on a scale from one to three with counties designated as Tier Three having the least amount of economic distress. Tier designation is based on four factors: average unemployment rate for the most recent twelve months in which there were available data, median household income for the most recent twelve months in which data were available, percent growth in population for the most recent 36 months for which data are available, and adjusted property tax base per capita for the most recent taxable year. Tier designations have met some recalcitrance, especially from counties that drop in tier designation. Audits provide an opportunity to counter some of the state growth statistics.

The North Carolina Approach

The North Carolina Local Government Budget and Fiscal Control Act (LGBFCA) (North Carolina General Statute 159 Article 3) provides the foundation that not only guides the budgeting process, but also provides policy guidelines that are specific to local government audits in North Carolina and the presentation of the audited financial statements. The North Carolina State Local Government Commission (LGC), which oversees this process, provides auditors with a checklist for every section of the audit from the Auditor's Opinion through the supplemental information and schedules. In the case of the MD&A, there are six categories for interpretation that coincide with GASB Statement 34 and more specifically, (¶9, ¶11c., ¶11d., and ¶11h.). Auditors are requested to determine the extent as to which the MD&A discusses the overall financial position of the unit, a comparison of the current FY financial position to that of previous fiscal years, an analysis of government and business type of activities, a discussion of balances and transactions of individual funds, and activities that have an effect on the net position of the unit.

The LGC also provides a detailed template for MD&A preparation inclusive of the above-mentioned policies as well as additional discretionary reporting opportunities. Preparers are instructed to have a 'Financial Highlights' section that will primarily discuss the net position and change in fund balances from the previous year. Next, there will be an overview of the financial statements usually inclusive of diagram of the audited statements. The government-wide financial statements are inclusive of government activities, business-type activities and component units. The Fund Financial Statements consists of all funds used by the government unit. Defining of specific accounting procedures is also included with a requirement for the modified accrual basis of accounting reporting method for the government funds in order for the reader to determine if the unit has the resources to fund government programs on a short-term basis.

The Government-Wide Financial Analysis section implements the required GASB Statements. There is a more detailed explanation of net position and fund balance and in some cases, extremely detailed activities that were vital in net position change in relation to the previous year. The template also suggests including two different figures outlining current net position with one analyzing assets and liabilities while the other highlights revenue streams against government services by function. Fund statement analysis is included as well and makes a comparison to the previous FY. For government funds, there can be comparisons of restricted versus non-restricted fund balances which is critical for governments as they pertain to unexpected costs.

Governments are also required to provide a table detailing the capital assets net of depreciation. This portion of the MD&A can contrast significantly among counties due to the thresholds for capital assets (Modlin 2016A). A table is also included itemizing county outstanding debt. This section not only includes traditional debt service instruments such as bonds and notes, but also the unfunded liabilities associated with retirement such as Local Government Employees' Retirement Systems (LGERS), Other Post-Employment Benefits (OPEB), and the Law Enforcement Officer Special Separation Allowance (LEOSSA) which are critical in overall net position determination. In the case of LEOSSA, previous findings have suggested that there has not been proper reporting or has been intermittent within note disclosures (Modlin

2016B). Counties can also discuss economic highlights or development possibilities as well as upcoming budget highlights for the upcoming FY.

RESEARCH DESIGN

Measuring the level of content change and building on previous literature required the solicitation of information from local government CAFRs. In this case, the focus of the study is county governments within North Carolina. Reasons for the single-state study include a consistency in form of government. All 100 counties operate under the commission-manager form of government. Within this same framework are the responsibilities of the finance office which usually includes both budgeting and financial reporting responsibilities. The Local Government Commission (LGC) which oversees all aspects of the financial implementation processes, provides a streamlined approach to the audit process with standardized templates for audit preparation.

Timing of the study was also of importance. Information was obtained from all 100 County government CAFRs for the FY ending 2019. A primary reason for FY choice was due to the impact on audits of the pandemic that affected fiscal years ending 2020 and beyond. The numerous intergovernmental funding streams that impacted audits and MD&A content represent a substantial change compared to governmental operations from subsequent years. With the availability of information from each county, comparison of levels of content among units provides some insight into stakeholder perception. The uniformity within the sample allows for a contrast that amplifies the special endogeneity that exists among government units while operating under equivalent policies, guidelines, and legislation. This same type of sample analysis becomes even more compelling with personnel function examination (Modlin 2019).

Much of the data for the analysis was obtained from county government audits from fiscal years ending 2019 (See Appendix). Standard & Poor's Bond rating information for the counties were obtained from the N.C. Department of State Treasurer Division of State and Local Finance while county Economic Tier ranking designations came from the N.C. Department of Commerce. The GFOA provided information for county recipients of the GFOA's Certificate of Excellence in Financial Reporting which is directly attributed to the CAFR presentation. The United States Bureau of the Census Geography Division provided information for county geographical size in square miles. Finance officer experience was collected from the salary study conducted annually by the University of North Carolina School of Government, years of research, and follow-up information from county websites and CAFRs.

A combination of GASB 34 guidelines outlining MD&A content and N.C. LGC guidelines concerning MD&A preparation was the basis for an initial model that demonstrates the overall influence of the hypotheses relation to specified disclosure content. In the following equation, SCORE can represent any of the three primary dependent variables used to measure the level of disclosure content.

$$SCORE = \beta_0 + \beta_1 NETPOS + \beta_2 FINEXP + \beta_3 AUDITFEE + \beta_4 AUDITOR + \beta_5 DEPT + \beta_6 IP + \beta_7 GFOA + \beta_8 INSURANCE + \beta_9 BOND + \beta_{10} TIER + \beta_{11} AREA + \beta_{12} PAGES \quad (1)$$

Measurement of all variables are found in the Appendix. The primary basis for the dependent variables is to test for how the "MD&A should conclude with a description of currently known facts, decisions, or conditions that are expected to have a significant effect on financial position or results of operations." (GASB 34 1999, Cod. 2200.9h). Initially, a bivariate analysis will examine the highest level of disclosure content based on the three dependent variables followed by ordered models that test for differing levels of disclosure. For current net position (NP) and fund balance (FB), the highest level of disclosure is coded according to specific activities related to the change in net position such as the retirement of debt service for a specified project. For the organizational variable (Organization), it is measured based on the discussion of at least three activities listed that will impact the unit such as personnel changes and future budget implementation practices that affect positions including (OPEB) funding. The point system developed to measure organizational factors is based on a similar method employed by Vermeer and Styles (2019) that was used to measure the overall content of online financial statements. The measurements are exploratory in nature and are based on an overall analysis of CAFRs with coding based on disclosure content. For all predictors, there are no preconceived expectations concerning the direction of the relationships.

The first area that is examined to determine the extent of MD&A disclosure are attributes related to the finance officer. The importance of the finance officer is critical in the construction of the MD&A with the finance officer either having oversight of the process or a direct involvement in the original development of the MD&A. Previous research has found that approximately three people are involved in audit preparation with at least one of them serving as the staff accountant (Modlin 2014). Therefore, there is the expectation that finance officer experience (FINEXP) will impact level of disclosure. Another change in variable exploration will be an examination of MD&A (PAGES) versus number of words (Brown & Tucker 2011; Rich et. al. 2021; Rich et. al. 2016).

Internal service factors that are expected to have some influence on disclosure content level. First, actual net position change (NETPOS) as a percentage from the previous year usually is highlighted especially in cases in which there is a substantial increase as compared to the previous year. Disclosure content level can change as well as changes in financial indicators can easily be influenced by the capital improvement plan (CIP) which is inclusive of various installment purchases (IP) that can include many practices from the traditional bank loan to debt service. Smaller governments with limited borrowing capacity have an increased reliance on more moderate levels of installment purchases.

Additional factors that contribute to level of disclosure related to internal factors consist of personnel factors that contribute to service delivery. Personnel costs are usually the primary driver of budgets; therefore, any type of insurance (INSURANCE) change notwithstanding retirement changes affect the overall financial position of the unit and thus provides an explanation for some deviation and potentially disclosure content. Law enforcement personnel, which are consistently the most expensive employees due to equipment, training, and additional service needs have the most impact from a budgetary standpoint, especially if an additional responsibility is managing a detention center. In the case of N.C. counties, sheriff departments (DEPT) usually have the highest levels of object of expenditure spending compared to other departments (Modlin 2019); therefore, this predominant role of the department can have an influence on MD&A disclosure. Additional departments that have high levels of spending among N.C. counties on a departmental basis are public schools, emergency services (EMS) and human services inclusive of social services and public health; therefore, county geographical size (AREA), which influences the spending practices within these areas, will be examined as well to determine the extent of MD&A disclosure.

Two auditor characteristics will be explored to determine if there is a relationship with the level of disclosure. In this case, there were two audit firms which conducted the largest number of county audits for FY ending 2019 and therefore these two firms will be used as a dummy variable in the analyses. Since these auditors are contracted frequently, the argument could be made that specialization and reputation contributed to their procurement (Copley, 1991; Lowensohn et. al. 2007). Audit costs will also be examined in relation to content. Although audit fees have been the focus of many studies as previously mentioned (Baber, Brooks, & Ricks 1987; Rubin 1988; Copley 1989), this study will attempt to determine if costs have any direct impact on specific MD&A disclosure level.

The remaining variables are based on external interpretation of government and county financial stability as well as transparency. The GFOA certificate for excellence in financial reporting based on the CAFR has been used in previous studies involving disclosure content with little significant relationship between the award and disclosure practices (Rich et. al. 2021); however, it will be tested against alternative dependent variables to determine if it can be correlated with alternative measures. County governments will also be examined according to bond rating status (BOND) as determined by Standard & Poor's. The CAFR is a major tool for obtaining as well as sustaining bond rating which is critical for having the lowest possible borrowing costs for debt issuance. The MD&A initial highlight section provides an insight into the government-wide statements as well as key fund statements to learn even more details. Tier designation as defined by the state (TIER) can provide some form of comparison with bond rating designations. State interpretation of the economic vitality of a county can influence spending practices and financial presentations to obtain a favorable view from external entities. This variable is also exploratory since it is a state endogenous variable.

SUMMARY STATISTICS AND PRELIMINARY RESULTS

Table 1 provides descriptive statistics for the entire sample inclusive of the mean, median, standard deviation, and quarterly values. Primary findings associated with the descriptive statistics are the differences between the larger versus the smaller units. The MD&As appear to be much more comprehensive among the top 75 percent values in both detail as well as document length (PAGES). More spending also takes place within public safety compared to other departments within this quartile. Finance officer experience is relatively strong within the sample exceeding ten years (See Appendix).

Discussions among the dependent variables appear to be rather standardized suggesting the primary goal of the MD&A is to meet GFOA and state required benchmarks and only in some cases providing an additional layer of detail, especially as it pertains to net position and fund balance. This is illustrated with both the organizational finding as well as some of the predictors such as insurance and installment purchase discussions. Tier level among the sample approaches a mean value of two; however, the number of counties that were designated as Tier 1 were nearly identical.

TABLE 1
DESCRIPTIVE STATISTICS

Variable	Mean	Median	Standard Deviation	Q1	Q3
NP (DV-Ordered)	2.08	2	.8	1	3
FB (DV-Ordered)	2.06	2	.9515	1	3
Organization (DV-Ordered)	2.1	2	.5412	2	2
NP (DV)	.74	1	.4408	0	1
FB (DV)	.44	0	.4989	0	1
Organization (DV)	.21	0	.4094	0	0
NETPOS	2	2	.8989	1	3
FINEXP	2.45	2	1.6104	1	4
AUDITFEE	1.78	2	.5610	1	2
AUDITOR	.44	0	.4989	0	1
DEPT	.66	1	.4761	0	1
IP	.74	1	.4408	0	1
INSURANCE	.12	0	.3266	0	0
GFOA	.52	1	.5021	0	1
BOND	.56	1	.4989	0	1
TIER	1.81	2	.7614	1	2
AREA	.41	0	.4943	0	1
PAGES	1.50	1	.6890	1	2

Net position was always the introductory indicator within the MD&As. Transparency levels were relatively high when net position increased compared to the prior fiscal year. Approximately 16 units had a negative net position with half providing detailed disclosure outlining the contributing factors. Net positions were highly influenced by capital project investments. These assets are acquired to provide services to citizens and cannot be used to offset future payables. Assets are reported net of the related outstanding debt; therefore, the origin of payment requirement has to be from alternative sources since the assets cannot be liquidated to expunge the liabilities. In some cases, there was very little specific net position quantitative disclosure except that it either improved or declined. In order to get a more concise determination, it was necessary to further examine the government-wide statements.

Fund balance disclosures had some similarities. Units which had a decrease in fund balance compared to the previous fiscal year were more likely to provide additional disclosure concerning the factors that led to the decline. Budget revisions were a frequent necessity due to the number of amendments based on changing estimates prior to official budget adoption, amendments made to recognize funding that could occur at any point during the fiscal year such as intergovernmental grants, and increases in appropriations that may be necessary in order to maintain services. As a result of the fund balance requirements set forth by the LGC, no county had a negative fund balance. To offset some of the expenditures, more efforts were made to control costs such as the increased monitoring and consolidation of operational expenses, under-forecasting revenues, and in one case, the implementation of performance budgeting. An influx of revenue due to property reassessments assist with higher unrestricted fund balance levels. In the year of the scheduled assessment, many local governments add temporary staff to assist with reassigning parcel values through a non-major special revenue fund.

TABLE 2
DETAILED MD&A BY FINANCE CATEGORY AND COUNTY BUDGET SIZE

Category	Less than $50M	$50M-$100M	$100M-$150M	$150M-$200M	More than $200M	**TOTAL**
Net Position	**18**	**27**	**6**	**8**	**15**	**74**
Fund Balance	**6**	**15**	**7**	**5**	**11**	**44**
Organizational Factors	**0**	**7**	**3**	**5**	**6**	**19**

Table 2 provides some reflection of the quartile findings from the above descriptive statistics. MD&As overwhelmingly consist of events that highlight the change in net position. Most notably, there was a focus on some form of debt service as the source of the change. In many cases, language in the MD&A suggested that as a county, the unit was fulfilling the state statutory obligations in providing the infrastructure needs for the service provision which was usually some form of infrastructure for public schools (N.C.G.S. 115C-408 1984). Legislation also requires local school administrative units to utilize three funds for budgeted monies (N.C.G.S. 115C-426 2017). While this was clearly stated, there appeared to be an undertone suggesting that these requirements hindered sustained positive net position. Several funding mechanisms were utilized to fund capital projects for schools including specific revenue funds dedicated to capital projects associated with public schools. In some cases, the funds were actually dedicated to a single public school. Larger counties had the ability to actually use a multiple funding model in which there were transfers between funds in order to provide ongoing revenue for capital expenditures.

Larger units were also much more likely to have numerous organizational factors that would impact the unit. For this study, these factors were isolated to personnel factors that affected the unit. Liabilities associated with compensated absences, sick-leave buyback, salary classification studies, and a full accrual and actuarial basis calculation for liabilities associated with OPEBs were just some of the factors that had an impact over the fiscal year. The implementation of a post-65 health insurance plan for eligible employees by Cumberland County that supplements Medicare coverage reduced liabilities by more than $100M for OPEBs for the fiscal year. In most cases however, the narrative emphasized personnel additions due to service requirement increases.

Contracted audit fee information has traditionally been a prompt for a significant amount of research; therefore, the inclusion of a table with fees according to budget size could provide further insight into MD&A level of disclosure (Table 3). For the most part, it was determined that county audit fees in North Carolina for FY 2019 had a range from $23,500 to $170,000 which was Mecklenburg County, the most populous county within the state. Seven counties had audit fees exceed $100K. All but two had budget sizes that exceeded $200M. Jackson County, which had a budget size of less than $100M with a full-time employee count of less than 500, was one of the counties that had audit costs in excess of 100K demonstrating the regressivity associated with some of the fees. Audit fees for all 100 counties averaged approximately $63,000.

TABLE 3
MEAN AUDIT FEES BY BUDGET SIZE

Category	Less than $50M	$50M-$100M	$100M-$150M	$150M-$200M	More than $200M	**TOTAL (Average)**
Audit Fee (Mean)	**$48,276.72**	**$57,301.47**	**$72,690.00**	**$74,911.11**	**$89,900.83**	**$63,675.90**

One of the variables under examination was the actual contracted auditor. Since the number of auditors that conduct county government audits appear to be so limited, there could be an impact on MD&A disclosure. The number of different audit firms conducting audits in 2010 were only 15 (Modlin 2012); whereas, there were 23 for FY 2019. Thompson, Price, Scott & Adams and Martin, Starnes, & Associates conducted 44% of the audits for all counties in 2019. Audit expertise is definitely a factor which is easily determined by the mandated and state-regulated Request for Proposal (RFP); however, costs are also a factor. Thompson, Price, Scott & Adams had the lowest average cost of any firm that conducted three or more county audits in 2019. Of the four audits that were under $30,000, Thompson, Price, Scott, & Adams conducted two of them with neither firm ever charging more than $100K in FY 2019.

Table 4 contains a pairwise correlation analysis of the variables used in the study. The results suggest a positive relationship between increased levels of actual net position (NETPOS) and the disclosure of activities that precipitated the actual position. A .05 relationship finding was also found to exist between a higher level of organizational factors (ORG) and activities that had an influence on fund balance levels (FB). The univariate results also provide some substantial support for the fourth hypothesis. Many relationships exist among TIER, BOND, and GFOA suggesting that external perception has elevated importance. The relationship between GFOA achievement and audit fees support previous findings (Johnson 1998). The number of variables that correlated with PAGES also suggest that specified information is included to ascertain practices that promote unit stability.

TABLE 4
PAIRWISE CORRELATIONS (N=100)

Var.	NP	FB	ORG.	NetPos	FinExp	Aufee	Aud.	Dept.	IP	INS.	GFOA	BOND	TIER	AREA	PGE
NP	**1.00**														
FB	**.112**	**1.00**													
ORG.	**.0817**	**.285****	**1.00**												
NetPos.	**.204****	**-.112**	**.055**	**1.00**											
FinExp	**.138**	**.028**	**-.053**	**.195****	**1.00**										
Aufee	**.175***	**.205****	**.335****	**-.060**	**-.057**	**1.00**									
Aud.	**.020**	**-.015**	**.038**	**.135**	**.015**	**-.156**	**1.00**								
Dept.	**-.137**	**-.172***	**-.200****	**.307****	**.123**	**-.245****	**.211**	**1.00**							
IP	**.064**	**.020**	**.0258**	**.127**	**.010**	**.175***	**.020**	**.056**	**1.00**						
INS.	**.079**	**.045**	**.414*****	**.138**	**- .200****	**.311****	**.169***	**.070**	**-.062**	**1.00**					
GFOA	**.024**	**.327****	**.250****	**.045**	**-.005**	**.446*****	**-.116**	**-.182***	**.115***	**.170***	**1.00**				
BOND	**.017**	**.225****	**.240****	**-.124**	**-.036**	**.424*****	**.017**	**- .286****	**.081**	**.090**	**.359****	**1.00**			
TIER	**.182***	**.249****	**.064**	**- .251****	**.054**	**.421*****	**-.070**	**- .292****	**.002**	**.011**	**.340****	**.444*****	**1.00**		
AREA	**-.109**	**-002**	**-.002***	**-.068**	**-.031**	**.183***	**.034**	**-.046**	**.077**	**-.120**	**.069**	**.229****	**.048**	**1.00**	
PAGES	**.000**	**323****	**.448*****	**-.049**	**-.078**	**.392*****	**-.147**	**- .277****	**-.100**	**.224****	**.321****	**.291****	**.164***	**.282****	**1.00**

Notes: Table 4 represents pairwise correlations of the variables used in the analysis.*** represents correlations at the .001 level; **at the .05 level; *at the .10 level. NP, FB, and ORG. are bivariate variables in this table.

MULTIVARIATE RESULTS

Table 5 presents the bivariate results for predicting high disclosure level. Three models are used in an effort to examine relationships between the predictors and three key components of the MD&A. For the initial model, there was a significant positive relationship between actual net position (NETPOS) and net position activity disclosure (NETPOS = .9837; Z statistic = 2.68) suggesting that as actual net position increases, there is a much higher likelihood of the disclosure of the activity that had the impact. Within this same model, DEPT is negative indicating that activities that influence net position are likely to be disclosed if law enforcement is not the primary functional classification expenditure recipient as compared to human services or public education. AUFEE was also significant and positive (AUFEE = 1.0989; Z statistic = 1.61) suggesting that units that are paying higher audit fees are likely to discuss key activities that impacted net position. State tier designation also had significance (TIER). This was confirmed with a direct comparison of county tier designation and NP. Counties with a Tier 2 designation had a higher level of net position disclosure compared to those in other tier classifications. Depending on the perception of the unit, efforts could consist of either attempting to bolster outlook and economic development practices for increased opportunities for lower bond ratings to avoiding a lower tier classification and the associated stigma. Additional findings pointed to net position disclosure having increased importance for counties with bond ratings compared to more detail surrounding fund balance.

The fund balance model only had two significant variables. First, there was a significant and positive relationship between a unit receiving the GFOA CAFR presentation award and fund balance activity disclosure (GFOA = .9836; Z statistic = 1.88). Second, there was a positive relationship between PAGES and fund balance activity disclosure (PAGES = 1.0770; Z statistic = 2.51). Both findings indicate the importance of external stakeholder perception of the unit. In the case of the GFOA finding, a dedication to reporting excellence in conjunction with the increased number of pages indicate efforts to provide extended statistics, tables, and additional information for more in-depth evaluation.

The third model also had several significant variables that demonstrated what contributed to an elevated number of organizational activity disclosures. Positive relationships existed between a high number of organizational factor disclosures and higher audit fees (AUDITFEE = .6927; Z statistic = .73), employee insurance change disclosure (INSURANCE = 3.2314; Z statistic = 2.69), and additional pages in the MD&A (PAGES = 1.5299; Z statistic = 2.45), while a negative relationship exists with disclosure and units that have the most spending in departments other than the Sheriffs Office (DEPT = -1.9552; Z statistic = -2.10). These findings are consistent with Table 2. Higher numbers of organizational factors are much more likely to impact the larger governments versus the smaller ones due to the number of personnel, which are usually the primary drivers of government expenditures.

Hypotheses support based on the initial set of models is somewhat mixed. There appears to be no support for Hypothesis 1. Finance officer experience was not significant with these findings, but still quite critical in the compilation of MD&As. It is most evident when the net position disclosure was isolated. Units with more experienced finance officers had much higher levels of net position disclosure within the MD&A. The null hypothesis may also have support for the fourth hypothesis. Only GFOA was significant and in only the FB Model. Overall, fund balance reporting was not as extensive as net position.

The models provided some support for Hypotheses Two and Three. AUDITFEE was significant in the NP and Organization Models. Higher levels of disclosure correlated with higher fees, especially once fees exceeded $50K. Many significant findings also supported Hypotheses Two. DEPT, INSURANCE, and PAGES were all significant within the Organization model while NETPOS and DEPT were significant in the NP Model. DEPT and PAGES were actually significant in two of the models providing evidence of the importance of departmental roles in service delivery, especially in consideration of capital project impact on overall financial position. These findings were also reflective of Table 4. Both variables were related to both the Organizational Model variable and several of the predictors.

TABLE 5
DETERMINANTS OF ELEVATED MDA DESCRIPTION BY NET POSITION, FUND BALANCE, AND ORGANIZATIONAL INFLUENCES

Panel	NP		FB		Organization	
NETPOS	.9837	(2.68)**	-.2693	(-0.93)	.4491	(0.98)
FINEXP	.1834	(1.06)	.0750	(0.50)	.1856	(0.79)
AUDITFEE	1.0989	(1.61)*	-.1300	(-0.23)	.6927	(0.73)**
AUDITOR	.1967	(0.34)	.3610	(0.73)	.7619	(0.96)
DEPT	-1.3626	(-1.93)**	-.0737	(-0.14)	-1.9552	(-2.10)**
IP	.2798	(0.44)	.3080	(0.54)	.7138	(0.79)
INSURANCE	.5995	(.53)	-.3959	(-0.44)	3.2314	(2.69)**
GFOA	-.9717	(-1.52)	.9836	(1.88)*	.2941	(0.38)
BOND	-.3531	(-1.10)	.0907	(0.35)	.4013	(1.03)
TIER	.8468	(1.85)*	.3474	(0.93)	-.8057	(-1.30)
AREA	-.6593	(-1.11)	-.6476	(-1.23)	.8383	(1.09)
PAGES	-.0315	(-0.06)	1.0770	(2.51)**	1.5299	(2.45)**
Constant	-2.7802	(-1.69)*	-2.5628	(-1.89)**	-6.4951	2.3622**
N	100		100		100	
Log. Lik.	-46.5003		-57.2558		-31.2392	
LR Chi-Squared (12)	21.61**		22.67**		40.31***	
McFadden's Pseudo R-Squared	0.1886		0.1653		.3922	

Notes: Cell entries are unstandardized parameter estimates; ****p* <.001; ***p* < .05; **p* < .10 (Two-tailed test). Z scores in parentheses. The table presents estimates of ordered logistic regression specifications. For the dependent variables, NP = 1 if disclosure has Activity + Net Position Quantitative Change + Net Position Increase/Decrease, FB = 1 if disclosure has Activity + Restricted/Unrestricted Fund Balance Values + Increase/Decrease in Fund Balance, Organization = 1 if three or more organizational activities disclosed

A more detailed analysis of disclosure is illustrated in Table 6. In this case, the dependent variables are ordered so that it can be determined at what level of disclosure is presented based on the predictors. The models are reflective of the overall equation constructed for the analysis. Within the NP Panel, there were inverse relationships between the department with the highest level of expenditures and a higher number of net position disclosures (DEPT = -.8954; Z statistic = -1.91) and the area of the county in square miles and increased net position disclosures (AREA = -.7535; Z statistic = -1.73). This finding is a contrast in comparison to Table 5. Counties with 500 miles or less of square mileage had disclosed net position at higher levels compared to larger counties. This finding is primarily a reflection of service needs rather than population. A positive relationship existed between designated tier level and an increased number of net disclosures including key activities that influenced the change over the past fiscal year.

The FB Model was consistent with the model in Table 5. A positive and significant relationship was found between governments that received the GFOA CAFR award for reporting excellence and reporting and an increase or decrease in fund balance levels, the amount of restricted versus unrestricted fund balance and activities that precipitated those changes (GFOA = 1.0151; Z statistic = 2.26). Findings were also positive and significant for the number of pages within the MD&A as well (PAGES = .9043; Z statistic = 2.23). The consistency of the findings of both panels within each table illustrate the importance of fund balance presentation in obtaining the GFOA award. The thresholds provide a way to differentiate between the differing levels of fund balance disclosure. Threshold 1 has a latent variable score of -.7030 indicating only one disclosure mention as compared to other categorical uses when all predictors are evaluated at the lowest level. Therefore, when Y = 1, the Y* is < -.7030. For disclosures of an increase or decrease in fund balance levels in addition to a discussion of unrestricted and restricted fund balance levels, the Y* is between -.7030 and 2.1447.

Specifying the number of organizational factors disclosed generated a new finding in the Organization Panel. A positive and significant relationship was found between a discussion of installment purchases and the number of organizational factors disclosed (IP = 1.0038; Z statistic = 1.66). The installment purchases provide a way for governments of all sizes to include key capital expenditures despite bond rating and tier status. As with Table 5, there were also positive and significant relationships between insurance and the number of organizational factors disclosed as well as the amount of contracted audit fees and the number of organizational disclosures. PAGES was the most significant and consistent finding among all the panels and in the case of this panel, there was a strong relationship with the dependent variable (PAGES = 1.7786; Z statistic = 3.22). The Organization Model proved to be one of the most effective models for determining alternate levels of disclosure. The twelve factors associated with organization level of disclosure was significant after being tested against a constant-only model $X^2(12, N=100) = 51.63$, $p < .0001$, indicating that the predictors, as a set, are reliable for predicting the number of disclosure levels among organization factors.

TABLE 6
DETERMINANTS OF DETAILED MDA DESCRIPTION BY NET POSITION, FUND BALANCE, AND ORGANIZATIONAL INFLUENCES

Panel	NP		FB		Organization	
NETPOS	.3362	(1.38)	.0031	(0.01)	.0651	(0.20)
FINEXP	.1195	(0.93)	.0626	(0.46)	-.0488	(-0.29)
AUDITFEE	.3247	(0.68)	.2342	(0.49)	1.3335	(1.96)**
AUDITOR	.3678	(0.85)	.2197	(0.49)	.1708	(0.31)
DEPT	-.8954	(-1.91)**	-.2980	(-0.61)	-.6992	(-1.13)
IP	.4592	(0.93)	-.0501	(-0.10)	1.0038	(1.66)*
INSURANCE	.8175	(1.09)	.3871	(0.55)	2.0522	(2.16)**
GFOA	-.3737	(-0.83)	1.0151	(2.26)**	.2956	(0.48)
BOND	-.3296	(-0.77)	.0162	(0.04)	.3102	(0.53)
TIER	.5635	(1.78)*	.4003	(1.26)	-.0122	(-0.03)
AREA	-.7535	(-1.73)*	-.2659	(-0.59)	-.0054	(-0.01)
PAGES	.3266	(0.90)	.9043	(2.23)**	1.7786	(3.22)***
Threshold 1	-2.5869		-.7030		2.5403	
Threshold 2	1.1950		2.1447		8.1092	
Threshold 3	3.1061		3.2892			
N	100		100		100	
Log. Lik.	-103.2962		-104.2904		-54.3761	
LR Chi-Squared (12)	18.87*		28.28**		51.63***	
McFadden's Pseudo R-Squared	0.0837		0.1194		.3220	

Notes:Cell entries are unstandardized parameter estimates; ****p* <.001; ***p* < .05; **p* < .10 (Two-tailed test). The table presents estimates of ordered logistic regression specifications. For the dependent variables, NP = 3 if disclosure has Activity + Net Position Quantitative Change + Net Position Increase/Decrease, FB = 3 if disclosure has Activity + Restricted/Unrestricted Values + Increase/Decrease, Organization = 3 if three or more organizational activities disclosed.

A coalescing of the tables is possible due to the high level of agreement among the models. The findings also have support for the second hypothesis and the role of the participants who have influence within the service provision process. The established capital needs that fulfill service provision within departments as part of their overall goals and objectives impacts overall unit net position and thus the need for elaboration within the MD&A as demonstrated by the PAGES, DEPT, IP and NETPOS findings among the models. The models also agree that the GFOA has importance for finance departments, especially as it relates to fund balance levels of disclosure. The non-significance of the AUDITOR variable cannot be precluded. Counties in North Carolina do indeed prefer auditors that specialize in government audits and as the AUDITFEE finding suggests, county officials attempt to input intangibles into the MD&As to demonstrate the impact of organizational factors.

CONCLUSION

This study has examined the level of disclosure within MD&As among county governments in North Carolina. Models developed for the study included the level of disclosure for net position, fund balance as well as organizational factors that had an impact on the financial condition of the unit. Consistent findings among the models indicate that higher audit fees, specified department activities, and the number of pages were significant with more disclosure. More specified models include tier level as defined by the state and the inclusion of installment purchase discussions. The overall findings demonstrate that while there is a template for disclosure inclusion, MD&As within audits are specifically written for specific stakeholders based on the distinguishable characteristics among the units that take place during the course of the fiscal year. It can easily be determined that MD&As are mainly designed for lenders, potential investors, and bond rating agencies. Demonstrating a strong financial position for the benefit of the lowest rate possible is consistent with previous findings (Baber and Gore 2008; Benson, Marks, and Ramam 1991; Fairchild and Koch 1998).

Findings within MD&As from this study provided some support for previous research. The level of consistency among the structure of MD&As was similar to the findings of Guo et. al (2009). Findings associated with key events that shaped net position and fund balance correlated with the findings of the National Federation of Municipal Analysts (Bloch 2016). Linguistic tone through content analysis was not examined in this study, but from a qualitative standpoint, there were indeed undertones of both alacrity and service recalcitrance. Rich, Roberts, and Zhang (2018) previously observed these variations within MD&A narratives.

The study has limitations as well. First, there was no clear indication as to the MD&A author. It could have been one or multiple staff. In some cases and considering the comprehensive nature of the coverage, more than one contributor is possible. Another limitation is the state oversight process that sets financial benchmarks. The state oversight process sets a minimal fund balance requirement which limits fund balance disclosure as it relates to any potential decline to the point that any discretionary fund balances have to be debited at the beginning of the fiscal year. Another major limitation is that there was no clear knowledge of organizational needs such as how the importance of projects is classified within the capital improvement plan. In a similar narrative, each county has clear goals and objectives that defines service needs. Some of this was discovered with the department spending findings. Another limitation is information surrounding the accounting expertise of staff. This becomes apparent with discussions that differentiate between modified accrual v. accrual basis of accounting and how this affects statement presentation and MD&A preparation.

The MD&A may have obtained an additional role as well due to both the reporting requirements and the way it can used to transmit critical assessment information without the need to dedicate a significant amount of time on the government-wide statements as well as the accompanying notes. The use of the MD&A as well as the Letter of Transmittal in combination may have decreased the importance of the GFOA CAFR award for reporting. It appeared throughout the study that the main goal of the MD&A, at least for these counties, was to fulfill some external goal in addition to LGC requirements. In some cases, basic MD&A reporting guidelines was all that was needed, especially for counties that have strong economies.

It cannot be stressed enough the importance of staff within the entire process. As a testament to this importance, it was noticed that many of the largest counties listed every member of the finance office at the front of the CAFR. The staff play a key role in the presentation for external reviewers and ultimately has an effect on the mission of the county. The author of the MD&A, for the most part, much have a comprehensive knowledge of nearly all aspects of the unit based on this study. The MD&As in some cases had very extensive discussions of economic activities in addition to the more specific areas that affected specific revenue sources. For larger units with multiple revenue streams and types of installment purchases not to mention accounting changes associated with evolving organizational practices, proper staff training and execution is essential.

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APPENDIX

Variable	Definition
NP (DV-Ordered)	**Specific Activity Mentioned that influenced NP in Addition to Standardized Discussion; 3 = Specific Activity Mentioned Net Position Quantitative Change + Net Position Increase/Decrease Source: CAFR**
FB (DV-Ordered)	**Specific Activity Mentioned that influenced FB in Addition to Standardized Discussion; 3 = Specific Activity Mentioned + Fund Balance Restricted/Unrestricted Values + Fund Balance Increase/Decrease Source: CAFR**
Organization (DV-Ordered)	**Number of Organizational Factors with Financial Implications; 3 = 3 or More Source: CAFR**
NP (DV)	**Specific Activity Mentioned that influenced NP; 1 = Specific Activity Mentioned Source: CAFR**
FB (DV)	**Specific Activity Mentioned that influenced FB; 1 = Specific Activity Mentioned Source: CAFR**
Organization (DV)	**Elevated Number of Organization Factors that Influence Financial Position; 1 = 3 or More Source: CAFR**
NETPOS	**Net Position Change from Previous Year; 3 = More than 10% Source: CAFR**
FINEXP	**Finance Officer Experience; 5 = More than 20 Years Source: UNC School of Government County Salary Study, CAFRS**
AUDITFEE	**Audit Fees by Unit; 3 = More than $100K Source: NC Department of State Treasurer**
AUDITOR	**Auditor Responsible for 2019 Audit; 1 = MSA or TPSA Source: CAFR**
DEPT	**Most Expenditures by Activity; 1 = Public Safety Source: CAFR**
IP	**Discussion of Installment Purchases; 1 = Yes Source: CAFR**
INSURANCE	**Discussion of Health Insurance Change; 1 = Yes Source: CAFR**
GFOA	**Recipient of GFOA CAFR Presentation for 2018; 1 = Recipient Source: Government Finance Officers Association**
BOND	**Standard & Poor’s Bond Rating; 1 = Bond Rating Source: N.C. Department of State Treasurer Division of State and Local Finance**
TIER	**County Economic Distress Ranking; 3 = Least Distressed Source: NC Department of Commerce**
AREA	**Number of County Square Miles; 1 = More than 500 Source: US Census Bureau Geography Division (2010)**
PAGES	**Number of Pages Covered by Audit; 3 = More than 15 Source: CAFR**