

2016

# The Financial Health of Massachusetts Nonprofit Arts Organizations (2009-2014)

Derek Krevat

*University of Massachusetts Amherst*

Follow this and additional works at: [http://scholarworks.umass.edu/cppa\\_capstones](http://scholarworks.umass.edu/cppa_capstones)



Part of the [Public Policy Commons](#)

---

Krevat, Derek, "The Financial Health of Massachusetts Nonprofit Arts Organizations (2009-2014)" (2016). *School of Public Policy Capstones*. 44.

[http://scholarworks.umass.edu/cppa\\_capstones/44](http://scholarworks.umass.edu/cppa_capstones/44)

This Article is brought to you for free and open access by the School of Public Policy at ScholarWorks@UMass Amherst. It has been accepted for inclusion in School of Public Policy Capstones by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact [scholarworks@library.umass.edu](mailto:scholarworks@library.umass.edu).

---

**The Financial Health of Massachusetts Nonprofit Arts  
Organizations (2009 – 2014)**

---

Derek Krevat  
MPPA / MRP Candidate  
Public Policy Capstone Report  
April 2016

*Advisors:*  
Dr. Lee Badgett  
Dr. Kathryn McDermott  
Dr. Susan Newton

School of Public Policy  
University of Massachusetts, Amherst

*Prepared for the Massachusetts Cultural Council*

## Executive Summary

This report analyzes the extent to which nonprofit arts organizations in Massachusetts have recovered from the financial recession of 2009. There are a number of ways to measure financial health, but amid recent concerns surrounding the diversification of revenue streams, long-term financial sustainability, and the availability of cash on hand among nonprofit organizations in Massachusetts, the analysis focuses primarily on these factors. Specifically, it uses four overarching measures to gauge financial health and recovery: surplus margins (as an indication of profitability), diversification of revenue streams, asset mixes, and months cash on hand (as an indication of liquidity). Using data on 259 nonprofit arts organizations in Massachusetts, this report shows:

### **Nonprofit arts organizations in Massachusetts showed strong signs of recovery between 2009 and 2013, but appear to have been negatively affected by economic factors in 2014.**

- 52 percent of organizations in the sample reported surpluses in 2014, compared to just 36 percent in 2009; however, the increase in the amount of organizations reporting surpluses was lower between 2013 and 2014 than it was between 2009 and 2013.
- Organizations in the sample had an average of 5.8 months of cash on hand in 2014 compared to an average of 4 months in 2009, but there are vast differences between budget cohorts, with large organizations consistently having less than 3 months of cash.
- Total revenue and total salaries also increased steadily between 2009 and 2013 for nonprofit arts organizations, but dropped in 2014.
- Government support and individual giving as percentages of total contributed revenue dropped by an average of 4.6 percent and 2 percent, respectively, between 2013 and 2014. This may be one explanatory factor behind the observed modest financial decline in 2014.

### **Although the overall financial picture for nonprofit arts organizations was better in 2014 than it was in 2009, there are still several causes for concern.**

- Between 2009 and 2014, individual giving consistently comprised about 40 percent of contributed income and asset mixes, pointing not only to low government, corporate, and foundation support across the state but also to a lack of diversification in revenue streams.
- Between 2009 and 2014, over one-third of organizations in the sample consistently had less than one month of cash on hand. Low liquidity levels are concentrated in the Greater Boston Area.

Given this apparent lack of diversification in revenue streams and asset mixes, as well as low levels of liquidity, this report recommends that the Massachusetts Cultural Council *undertake a thorough action-oriented needs assessment* geared toward short- and long-term financial dangers and *incentivize cooperative frameworks for arts management* to help organizations use resources more strategically and better plan investments.

## Introduction

Nonprofit arts organizations in Massachusetts play a critical role in the cultural fabric of the Commonwealth. In addition to offering nationally recognized concerts and performance, they provide free programming to inner city communities and educational opportunities through after school programs and museum courses. Yet, they are subject to the common business challenge of procuring a healthy balance between profits, donations, and government support in order to survive. Additionally, these arts organizations face a set of economic challenges unique from other nonprofit organizations because of their reliance on non-physical products and nontraditional services, such as performances. The economic recession of 2009 magnified these challenges, especially with respect to earned income, given that 70 percent of the state economy is consumer based (Leigh and Blakely, 2013: 2).

A developed, policy-based perspective of how well arts organizations have recovered from the recession is important for the MCC to understand. Doing so will inform policy options through giving the agency a clear understanding of their grantees' long-term prospects, allowing the agency to put additional funds to good use, and working toward developing a sense of which types of organizations need support (The Bridgespan Group: 2). Therefore, this report seeks to answer the following research questions: have nonprofit arts organizations in Massachusetts recovered from the financial recession of 2009? Additionally, where do differences in financial health exist among different types, budget sizes, and geographic locations of organizations?

To answer these questions, this report uses data from DataArts, which provides detailed figures on nonprofit arts organizations' balance sheets, budgets, and personnel across Massachusetts. Although the research question requires quantifying the concept of financial health, the dataset from DataArts includes only nonprofit organizations. Because success in nonprofit organizations is defined not necessarily by profitability but by the fulfillment of a mission, the concept of financial

health is not straightforward. Therefore, this report uses five overarching measures based on available data to gauge financial health and recovery: diversification of revenue streams, expense concentrations, asset mixes, months cash on hand (as an indication of liquidity), and surplus margins (as an indication of profitability).

The rest of this report proceeds as follows: the next section provides an overview of the Massachusetts Cultural Council and this report's origins; the context section provides a summary of recent reporting on the financial health of arts nonprofits in the state; the literature review summarizes and justifies the measures of nonprofit financial health this report uses; the methodology section describes the DataArts sample in more detail and the methods the analysis uses; the first half of the findings section focuses on answering whether arts nonprofits' financial health has improved since 2009 using trend data on surpluses relative to deficits, employment, months cash on hand, and the portion of organizations' budgets spent on programming; the second half of the findings section focuses specifically on "common-sized" measures of organizations' revenue concentrations, expense concentrations, and asset distributions; and the recommendations section uses the findings to suggest future policy options for the Massachusetts Cultural Council to consider.

### **The Massachusetts Cultural Council**

This report is a Master of Public Policy capstone project prepared on behalf of the Massachusetts Cultural Council (MCC). The MCC is a state-funded agency with a budget of approximately \$14 million as of fiscal year 2016 (Massachusetts Cultural Council, 2016). The agency's mission is to "promote excellence, access, education, and diversity in the arts, humanities, and sciences to improve the quality of life for Massachusetts residents and contribute to the vitality of our communities." To fulfill this mission, the MCC uses grants, services, and advocacy for nonprofit cultural organizations, schools, cities and towns, and artists. Its Cultural Investment Portfolio includes 380 nonprofit arts organizations (many of which are included in this analysis). In

2015, the MCC estimated that these organizations contributed an economic impact of \$2.2 billion to the state economy not only through their spending but also through their audience's ancillary spending (Massachusetts Cultural Council, 2016). Although economic impact is large, the MCC has requested this current report to better understand the extent to which the nonprofit organizations in its funding portfolio have recovered from the financial recession of 2009. Indeed, the agency lists a "robust nonprofit cultural sector" as one of its top budget justifications in its fiscal year 2017 budget request. In this context, understanding the current state of the agency's funding portfolio will assist in fulfilling this goal.

### **Context: Arts Nonprofits in Massachusetts**

In the past two years, the discussion of nonprofit financial health in Massachusetts has been centered on the City of Boston, which is currently writing a major Cultural Plan that is expected to be complete in June 2016. One major goal of the cultural planning process is to "understand the creative capital of Boston and create a plan that will prioritize, coordinate, and align public and private resources to strengthen this creative capital over the long term" (Boston Creates, 2015). The plan seeks to use Boston's cultural community more strategically as an area for economic growth (Philadelphia Cultural Alliance, 2015: 72).

Against this backdrop, several recent reports have described the financial health of arts nonprofit organizations specifically in the Greater Boston Area. Collectively, these reports provide the following narrative: Although the financial crisis of 2009 significantly impacted Boston-based arts nonprofit organizations in a negative way, they have since rebounded largely due to individual donations. However, the reliance on individual donations has become a double-edged sword. Despite their role in facilitating arts nonprofits' financial recovery, they are subject to more frequent changes and are therefore a less stable revenue stream than corporate contributions and public support. Additionally, a common trend demonstrated by these reports is that most nonprofit arts

organizations suffer from low cash reserves. The following three paragraphs provide a chronological summary of these reports.

In 2012, the Boston Foundation released a report tracking arts organizations from 2003 – 2010, finding that the economic downturn caused museums, historical societies, and cultural groups to experience a 3 percent real decline in revenues during this period (2012: 45). Consequently, the report concluded that the arts industry “has not been resilient enough to successfully weather the economic cycle” (46).

A paper from the Philadelphia Cultural Alliance revealed that nonprofit arts organizations in Boston may be reversing this trend. Between 2009 and 2012, the authors note that Boston experienced a 52 percent increase in earned income, which was the highest increase among all the major cities included in their analysis (72). This increase in earned income was driven by an 18 percent increase in attendance rates at events and performances, and complemented increases in foundation funding, which ultimately boosted total revenues for nonprofit arts organizations in Boston by 35 percent between 2009 and 2012. At the same time, however, the paper found that that 45 percent of nonprofit arts organizations in Boston reported deficits over this period (72).

More recently, TDC, a Boston-based consulting firm, produced a report on behalf of the Boston Foundation comparing nonprofit arts organizations in Boston to those in other large cities. Among other findings, this report pointed out several observations related to the lack of diversification among Boston-based nonprofit arts organizations’ revenue streams. Specifically, it found that “Boston has the highest or second-highest median individual giving in each budget cohort” when compared to other similarly sized cities (Koo and Curtis, 2016: 9). The report also demonstrated that organizations of every budget size in Boston have higher endowments than other cities in the study, potentially because of the concentration of museums and historic sites. It also found that very few foundations in Boston support nonprofit arts organizations and that nonprofit arts organizations in Boston receive the lowest amount of government funding per capita relative to

other cities (27). As such, the report's authors suggest that the lack of diversification in revenue streams is problematic because it inhibits the capacity of arts organizations to take risks. Similarly, the report noted that high facility costs are a problem for Boston-based arts organizations. Unlike other cities, such as San Francisco and New York, Boston does not have a city program or nonprofit organization devoted to addressing high facility costs (Koo and Curtis: 24). Finally, the TDC report notes that almost one-third of Boston's arts organizations have less than one month of cash available.

The findings from the Philadelphia Cultural Alliance report and TDC's analysis align with the results from the Nonprofit Finance Fund's 2014 national survey to nonprofit arts organizations, which found that about 40 percent of respondents reported less than three months of available cash in 2014. Additionally, this survey found that the top challenges nonprofit arts organizations are facing include achieving long-term financial stability, not having enough staff, marketing and outreach, diversifying funding sources, and developing cash reserves (18). It also found that 71 percent of arts organizations reported higher surpluses in 2013 than in 2014 (14), potentially pointing to a decline in financial health after four years of growth. The Urban Institute reinforces this observation, noting that nationally, over 40 percent of arts nonprofit organizations financially declined between 2013 and 2014, as measured by a 3 percent or higher drop in gross receipts (Blackwood, 2016).

### **Literature Review: Measuring Nonprofit Financial Health**

Given the concerns described above, namely those surrounding the diversification in revenue concentrations, asset distributions, and cash reserves, this report prioritizes these three measures of financial health. To do so, it borrows concepts and measures from the literature on nonprofit financial health (beyond just the arts). First, though, it uses figures on organizations' surplus margins and efficiency ratios (program expenses as percentages of total expenses) as



overarching measures to determine whether arts organizations have indeed recovered from the financial recession.

Although focusing on whether or not nonprofit organizations have a surplus or deficit is not necessarily informative about a nonprofit's success because their mission is not to create profit (Keating and Frumkin, 2008: 29), having some profit ensures that organizations have enough resources to meet their needs (Boston Foundation, 2008: 10). Indeed, without any operating surplus at any period, organizations would have a difficult time fulfilling their mission. In performing arts organizations, for example, performances still require spending gained from sources other than earned income because rehearsals must occur before the earned income is generated, which surpluses can fund (Throsby, 1994).

Expense concentrations provide further insight into overarching financial health because they help explain the degree to which organizations use their budgets to deliver programs and services in relation to more administrative or support activities, such as fundraising. In fact, the National Association of State Arts Agencies notes that many grant making agencies and stakeholders use the “program efficiency ratio” (program expenses as a percentage of total expenses) as a measure of success (Keating and Frumkin, 2010: 50). Certainly, as Scheff and Kotler of the Harvard Business Review note, it is important for arts organizations to show funders that “their grant money goes toward artistic programs, not toward light bulbs and rent” (1996).

At the same time, Rodney Christopher of Grantmakers in the Arts notes that efficiency ratios and surplus margins are “rarely sufficient to do the job” when explaining financial health because they do not reflect organizations' adaptability and sustainability (2011: 19). As such, determining adaptability (short-term success) requires a closer examination of fluid assets and liquidity, while determining sustainability (long-term success) requires a more in depth analysis of revenue concentrations and asset allocations.

With respect to a measure of liquidity, Christopher recommends using a “months cash on hand” figure, which is calculated by dividing total cash by each organizations’ monthly expenses (20). This figure shows how many months an organization can operate with its available cash. Because cash is one of an organization’s most liquid assets, this measure can gauge each organizations’ short-term liquidity.

To measure sustainability in nonprofit arts organizations this report uses “common-sized ratios,” or expressions of selected financial indicators as percentages of total revenue, total expenses, and total assets (Fried, 2010). Such measures help to describe the extent of diversification among organizations’ revenue streams, expenses, and asset concentrations (Keating and Frumkin, 2001: 49). With respect to how common-sized ratios relate to sustainability, Clara Miller of the Nonprofit Finance Fund writes that a common theme among financially healthy nonprofit organizations is that their revenue and asset concentrations are diverse enough to support a shift in another area (Miller, 2013: 8). If, for example, an organization receives a new performance facility because of a large individual contribution, it must also have the capacity to fund the programs that the new facility will showcase. In other words, a healthy capital structure requires some semblance of proportionality between an organization’s liquid and fixed assets. With regard to the specific indicators gauged using common-sized ratios, Miller groups the components of arts organizations’ asset allocations into four categories: cash; receivables; plant & equipment; and investments. This report uses these asset allocation ratios as well as ratios breaking down earned income, contributed revenue, government funding, and expense concentrations into their component parts.





Overall, this report seeks to fill two gaps in the reporting on financial health of the cultural sector in Massachusetts: it analyzes organizations across the entire state as opposed to just the Greater Boston Area as well as includes all available data from 2014, which is more recent than past in depth financial analyses have used. Indeed, although Boston is certainly a hub for arts organizations, the MCC supports suburban and rural arts, as well, through 329 cultural councils and


2,500 volunteers, many of which are outside of the Greater Boston Area. The sections that follow use this newer and more holistic dataset to build on past studies' findings on both the diversification of arts organizations' revenue streams, expenses, and assets as well as their levels of liquidity and profitability.

## Sample

To analyze the financial health of arts organizations in Massachusetts, this report relies on data collected by a nonprofit organization called DataArts. Each organization receiving funding from the MCC is required to fill out a data profile through this organization. It should be noted that this dataset does not include every arts nonprofit organization in the state: because those that are included must have the capacity to obtain state funding, the sample excludes organizations with extremely low budgets. Nonetheless, as Table 1 shows (below), organizations with budgets of \$50,000 or less are the most represented budget category in the dataset. Additionally, although over 600 nonprofit arts organizations in Massachusetts participate in reporting to DataArts, the dataset for this report includes just 259 nonprofit arts organizations due to incomplete self-reporting. Given that one goal of this report is to analyze change over a six-year period it would be problematic to include organizations that were not represented in more than one of these years. Nonetheless, as Tables 1 and 2 show, the organizations represented in the sample stretch across every county of Massachusetts and vary greatly in budget size and organizational mission. Given this variability, the analysis breaks down the organizations in the sample by the following three categories:


**Budget Size:** The organizations represented in DataArts range from total annual expenses of less than \$10,000 to those with greater than \$5,000,000. Therefore, this report breaks the organizations down by five categories based on annual expenses:


-  **Very Small:** \$50,000 and lower
-  **Small:** \$50,000 - \$150,000
-  **Medium:** \$150,000 - \$350,000
-  **Large:** \$350,000 - \$1,000,000


 **Very Large:** \$1,000,000 - \$5,000,000


These five categories will provide a clearer picture of financial health for organizations of all budget sizes. They were created based largely on the Philadelphia Cultural Alliance's classification, but added the category for organizations with annual expenses of \$50,000 or less to better assess the challenges very small organizations face. Additionally, as Table 1 shows, organizations with \$50,000 or less are the most represented in the DataArts dataset.


**Type of Organization:** The organizations represented in DataArts also have very diverse missions. They are therefore broken down into four categories, which mirror the four-part classification system used by Grantmakers in the Arts due to overarching similarities of organizations' mix of assets within each category (2003). These four mission-based categories are:

 **Performing Arts:** This classification includes theater companies, performance venues, music societies, and dance companies. Examples in the dataset include Worcester Chamber Music Society, Shakespeare & Company in Lenox, and the Boston Youth Symphony Orchestra.

 **Visual Arts:** This category includes mainly museums and organizations that offer visual arts exhibits in their area of expertise. Examples include the Chatham Marconi Maritime Center in North Chatham and the South Shore Children's Museum in Hanover.

 **Community Arts & Education:** As Tables 1 and 2 show, this is the largest category. It encompasses organizations that work directly in the community to engage people and audiences in non-arts settings, namely education. Examples in the dataset include the Eliot School in Jamaica Plain, which offers classes in arts and crafts, and the Hopkinton Center for the Arts in Hopkinton, which offers classes for youth, teens, and adults in the visual and performing arts.

 **Support Organizations:** Support organizations are nonprofit organizations that work on capacity building efforts to support other nonprofit organizations, whether through grants or technical assistance. Local art agencies (often organized as nonprofits), which make grants to local artists and other cultural institutions, fall under this category.

 **Other:** As Tables 1 and 2 show, this category is the second largest. It includes mainly historical societies and organizations committed to cultural landscapes and/or the preservation of natural amenities. Examples in the dataset are the Falmouth Historical Society and the Nature Connection in Concord.

**Region:** Finally, the results are sorted using six categories to account for regional differences where appropriate: Greater Boston, North Shore, South Shore, Cape Cod and Islands, Central, and

Western. These categories are based on the Metropolitan Area Planning Council’s breakdown with the addition of using Cape Cod as its own category to observe differences that may be specific to that area.

Note that the budget size category is the primary mode of analysis, with type of organization and geography only used where there are substantial differences between these categories. In other words, all the data on the concepts below are broken down by budget size, with geography and type of organization only broken out when warranted. This is because after testing each dependent variable (described below), the largest differences occur between organizations with differences in budget size as opposed to differences in region or organization type.

	<b>Performing Arts</b>	<b>Visual Arts</b>	<b>Community Arts &amp; Education</b>	<b>Support</b>	<b>Other</b>	<b>Total</b>
<b>Very Small</b>	9	12	20	3	15	<b>59</b>
<b>Small</b>	12	8	23	4	7	<b>54</b>
<b>Medium</b>	14	10	15	3	11	<b>53</b>
<b>Large</b>	5	10	21	1	10	<b>47</b>
<b>Very Large</b>	4	15	9	5	13	<b>46</b>
<b>Total</b>	<b>44</b>	<b>55</b>	<b>88</b>	<b>16</b>	<b>56</b>	<b>259</b>

	<b>Performing Arts</b>	<b>Visual Arts</b>	<b>Community Arts &amp; Education</b>	<b>Support</b>	<b>Other</b>	<b>Total</b>
<b>Boston</b>	9	6	14	6	8	<b>43</b>
<b>North Shore</b>	14	14	28	2	11	<b>69</b>
<b>South Shore</b>	4	8	10	0	9	<b>31</b>
<b>Cape Cod &amp; Islands</b>	5	12	15	2	13	<b>47</b>
<b>Central</b>	4	3	8	3	6	<b>24</b>
<b>Western</b>	8	12	13	3	9	<b>45</b>
<b>Total</b>	<b>44</b>	<b>55</b>	<b>88</b>	<b>16</b>	<b>56</b>	<b>259</b>

	<b>Very Small</b>	<b>Small</b>	<b>Medium</b>	<b>Large</b>	<b>Very Large</b>	<b>Total</b>
<b>Boston</b>	6	6	10	9	12	<b>43</b>
<b>North Shore</b>	6	20	14	15	14	<b>69</b>
<b>South Shore</b>	12	7	3	5	4	<b>31</b>

<b>Cape Cod &amp; Islands</b>	8	9	10	12	8	<b>47</b>
<b>Central</b>	10	6	4	2	2	<b>24</b>
<b>Western</b>	17	6	12	4	6	<b>45</b>
<b>Total</b>	<b>59</b>	<b>54</b>	<b>53</b>	<b>47</b>	<b>46</b>	<b>259</b>

Classifying the sample based on budget size, type of organization, and geography allows for peer benchmarking, which adds perspective to this report’s analysis and methods. In other words, through categorizing the organizations in the dataset, the MCC will be able to compare organizations outside of the dataset to those in each category to better understand where it falls relative to its peers in the state.

### **Methodology**

This report couples graphical exploratory data analysis with regression analysis. Exploratory data analysis is a method that summarizes key data points, often graphically, to observe trends (Information Technology Laboratory, 2014). Such an approach can assess the direction and rough size of relationships between explanatory and outcome variables (Seltman, 2015: 61). This method is useful here not only because of the breadth of variables involved in explaining nonprofit financial health, but also because of the diverse set of organizations represented in the dataset. The outcomes associated with financial health are not black and white and therefore require multiple calculations. Additionally, as described in the sample section above, there are five budget cohorts, four categories for organization types, and six regional categories.

This diversity is accounted for through using the categories for type of organization, region, and budget size as independent variables and assessing whether there are statistically significant differences between them as they relate to the dependent variables the literature review highlights. To this end, dummy variables were created to represent these independent variables. In the dataset, each budget cohort, region, and organization type is assigned a “1” or “0” to indicate membership in each of the mutually exclusive and exhaustive categories (Skrivanek, 2009). These dummy variables are then coupled with the dependent variable of interest for each test and run through the Stata

statistical software package to test whether there are statistically significant differences between groups. For each of the dummy variables, the “base” group against which each regression coefficient is compared was chosen based on a consideration of both the sample size and the population size (e.g. for the regional variable, Boston is the base group due to its large population despite the fact that it is not the most represented region in the sample; for budget size, very small organizations are the base because they are the largest in the sample; for organization type, community arts & education organizations are the base they are the largest in the sample). The following variables are used as dependent variables:

- ✚ Surplus margin
- ✚ Efficiency ratio (program expenses as a percentage of total expenses)
- ✚ Liquidity (months of cash organizations have on hand relative to their monthly expenditures)
- ✚ Total employment
- ✚ Cash, total receivables, plant and equipment, and endowments as percentages of total assets
- ✚ Earned income, contributed income, and government support as percentages of total revenue, which are then broken down into the subcategories of:
  - Ticket sales, membership revenue, investment returns, tuition income, and rental income as percentages of total earned income
- ✚ Diversification of revenue sources (individual support, foundation support, corporate support, and government support as percentages of total contributed income)

With regard to whether or not nonprofit arts organizations have recovered from the financial recession, this report breaks each of these measures down by year. Additionally, benchmarks of these figures were calculated as overall means for all observations in the dataset between 2009 and 2014. Benchmarking values for each year to the aggregated values will allow the MCC to see where certain measurements fall relative to the other years in the dataset. Presenting this information lends itself well to exploratory data analysis given this method’s prescription of graphing numeric variables “side-by-side based on categorical variables” to observe differences between

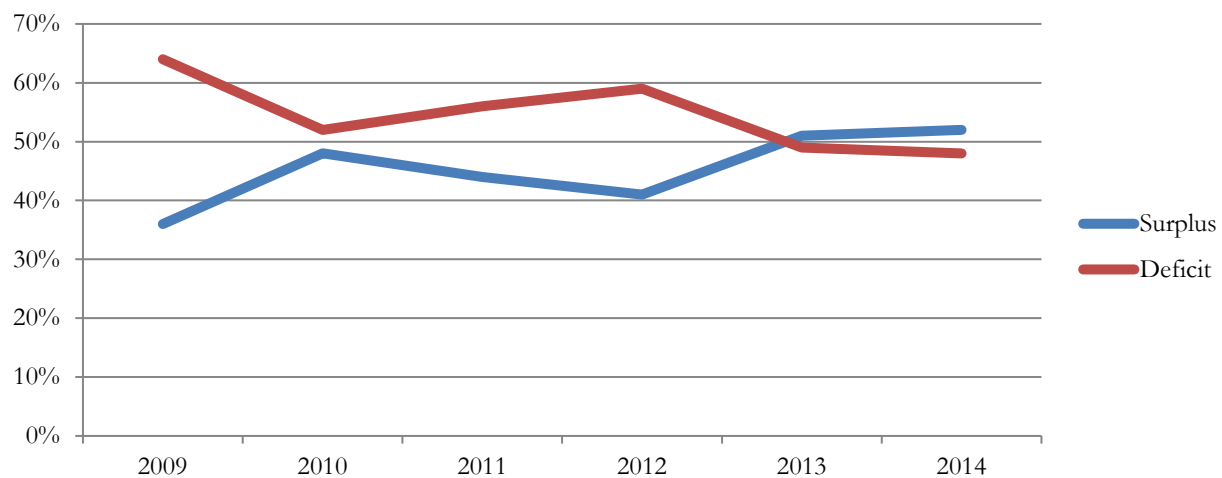
groups (Seltman: 91). It should be noted that although the findings section below discusses each of the points above, it only graphically presents the variables with statistically significant differences between groups or that changed drastically over time. Additionally, the regression outputs are listed in the Appendix. Thus, not every dependent variable is graphically displayed by every category in the interest of space.

## Findings: Trend Data

### *Surplus Margins*

Figure 1 shows that in 2014, far more nonprofit arts organizations in Massachusetts reported surpluses than in 2009. In 2009, 64 percent of the organizations in the sample ran deficits compared to just 36 percent reporting surpluses. In 2014, however, more organizations reported surpluses than deficits. Although this is a promising trend, it still means that 48 percent of organizations reported deficits in 2014.

**Figure 1. Percent of Organizations Reporting Surpluses or Deficits, 2009 - 2014**



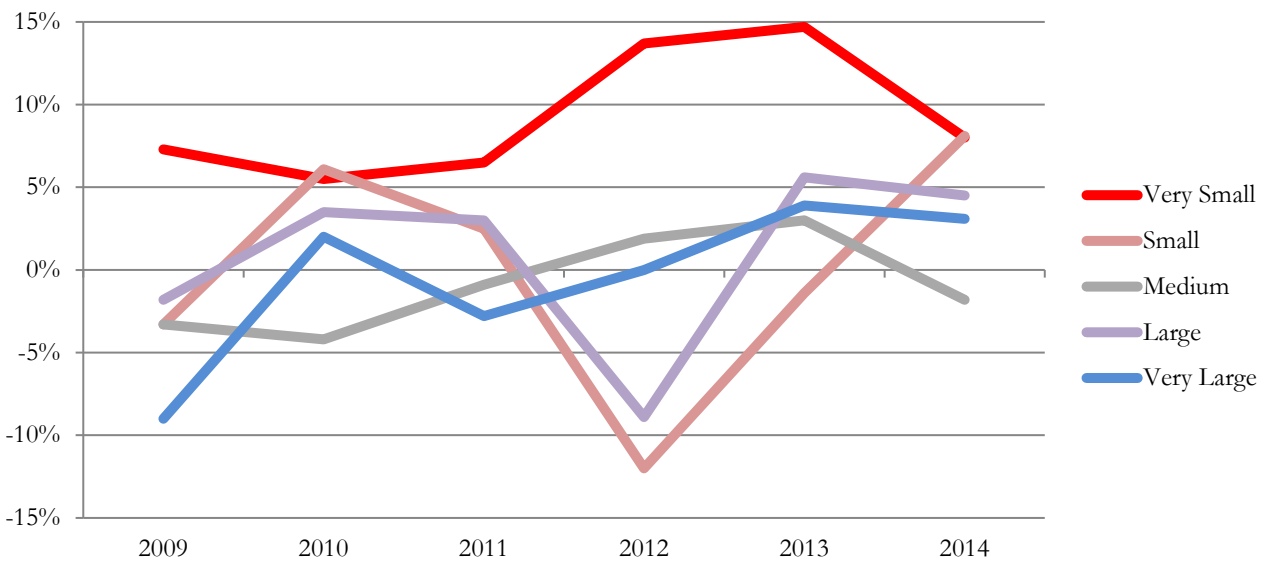
*Source: DataArts, 2015*

Figure 2 presents each budget cohort's surplus margin between 2009 and 2014. Surplus margins were calculated by subtracting total expenses from total revenue and then dividing this figure by total revenue. The Boston Foundation recommends that nonprofit organizations maintain



at least 2 percent of surplus relative to deficits (Keating, 2012: 9) and since 2009 arts organizations across Massachusetts have on average met this threshold. In 2009, across all organizations in the sample the surplus margin was about -5 percent, and in 2014 this rose to 3.5 percent. However, as Figures 2 and 3 show, this varies at a statistically significant level by budget size and type of organization. Medium-sized organizations, as well as community arts and education institutions, have experienced the steadiest growth since 2009 with performing arts organizations experiencing a relative decline over this period. Another takeaway from Figure 2 is that very small organizations have consistently maintained relatively high surplus margins. Although these numbers do not show whether such surpluses were planned or unplanned, they could show that small organizations have made it a priority to keep revenues high relative to expenses, perhaps to avoid financial danger in the face of another recession.

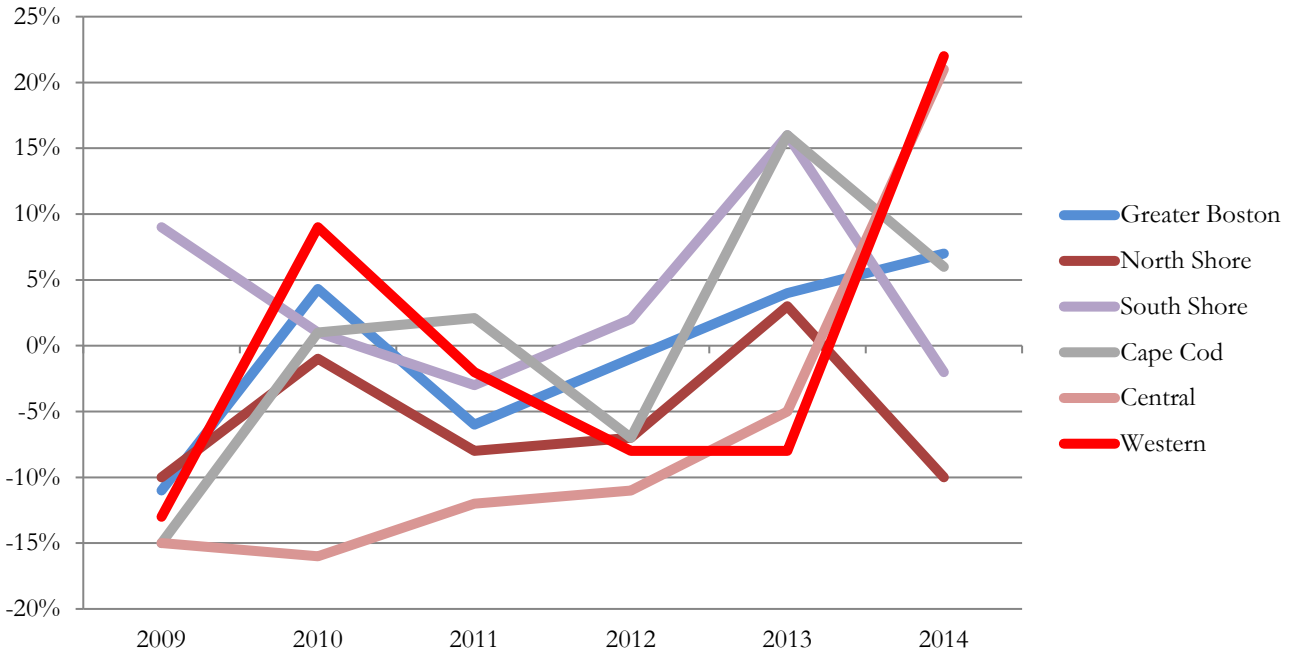
**Figure 2. Mean Surplus Margins by Budget Size, 2009 - 2014**



*Source: DataArts, 2015*

*Note: Two outliers were dropped because of extreme values likely due to one-time infusions of cash*

**Figure 3. Mean Surplus Margin by Region, 2009 – 2014**



*Source: DataArts, 2015*

Regression analysis shows that surplus margins differed significantly across some regions between 2009 and 2014 (see Table 1 of the Appendix). According to Figure 3, nonprofit organizations in the sample located in central Massachusetts have made consistent increases in surpluses with those on the South Shore, North Shore, and Western Massachusetts have decreased their surpluses slightly in 2014.

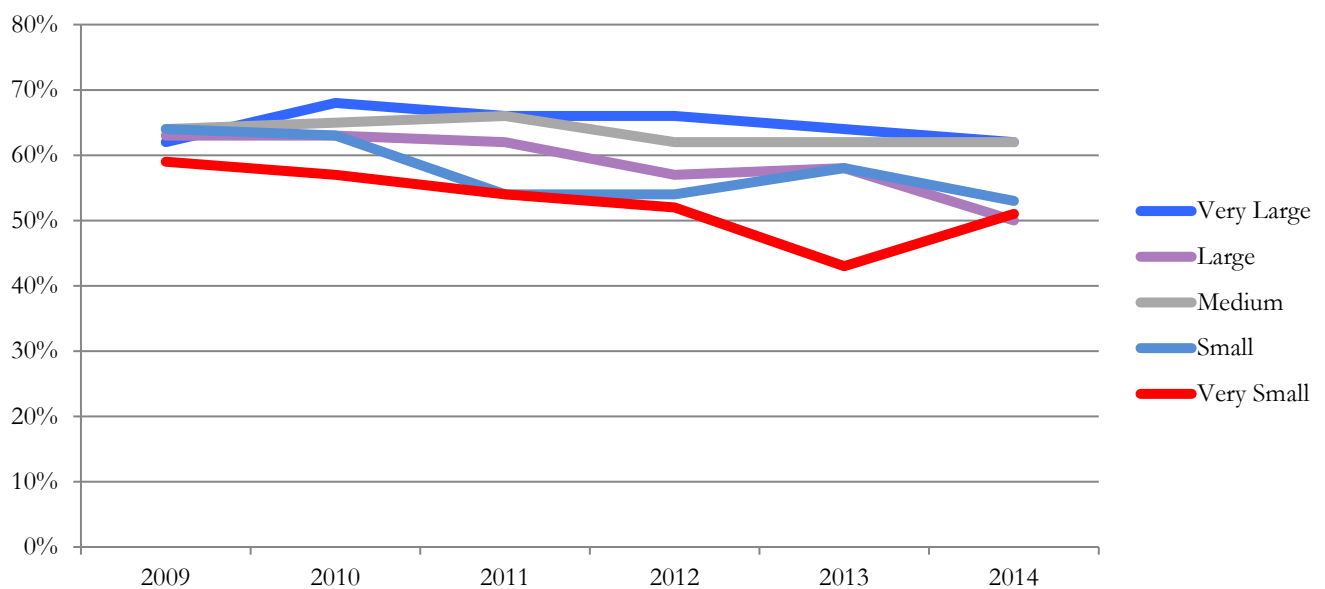
#### *Efficiency Ratios*

It is worth noting that running deficits or low surpluses is not necessarily problematic for nonprofit organizations. The observations on surplus margins may simply point to the fact that

organizations are intentionally spending the funds they have on programs. It is common for nonprofit organizations to deliberately decide to spend down their cash reserves, which results in an operating deficit, but one that is planned (U.S Department of Health and Human Services, 2015).

Therefore, it is helpful to review these figures in tandem with Figure 4 below on extent to which organizations have spent their revenues on programs over time. Given that the majority of organizations' expenses did go toward programs between 2009 and 2014, the low surpluses that organizations have reported are not overly problematic, at least in the short run. In the long run, however, low surpluses may not protect arts nonprofit organizations against something like another financial recession.

**Figure 4. Program Expenses as Percentage of Total Expenses by Budget Size, 2009 - 2014**



*Source: DataArts 2015*

Indeed, Figure 4 shows that organizations across all budget categories have consistently spent 50 and 70 percent of their annual expenses on programming. That said, these figures also show that overall program expenses have slightly decreased since 2009. This is largely because they have invested increased amounts in administrative expenses. Although the differences in program

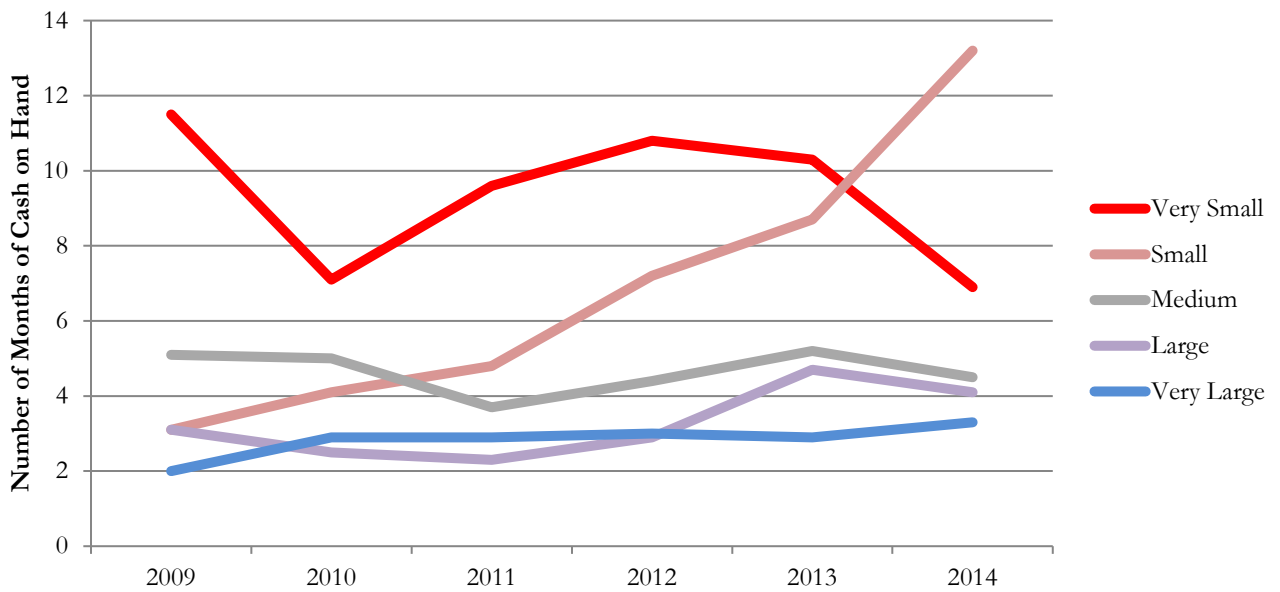
expenses between these budget categories are small, they are nonetheless statistically significant (see Table 1 of the Appendix).

### *Liquidity*

As mentioned in the literature review, in addition to surplus margins and measures of program expenses, it is important to understand whether arts organizations have sufficient cash resources to deliver their mission and pay their obligations on time (Keating et al., 2008: 9).

Although many measures can gauge liquidity levels, Figure 5 below presents ratios for “months cash on hand,” which were calculated by dividing current monthly expenses by organizations’ total cash and cash equivalents. The numbers translate to how many months a nonprofit organization would be able to pay off its current expenses with cash reserves if it did not receive any new revenue. The Boston Foundation notes that a rule of thumb is that nonprofits should have at least three months of cash on hand as a “liquidity buffer” (Keating et al.: 9). Against that benchmark, most arts nonprofit organizations were struggling with respect to liquidity between 2009 and 2010, with very large organizations having an average of less than three months of cash on hand. Since that time liquidity levels increased substantially for small organizations, increased somewhat for large and very large organizations, and dropped significantly for very small organizations in 2014. There are few significant differences between different types of organizations and regions.

**Figure 5. Mean Months Cash on Hand by Budget Size, 2009 – 2014**



*Source: DataArts, 2015*

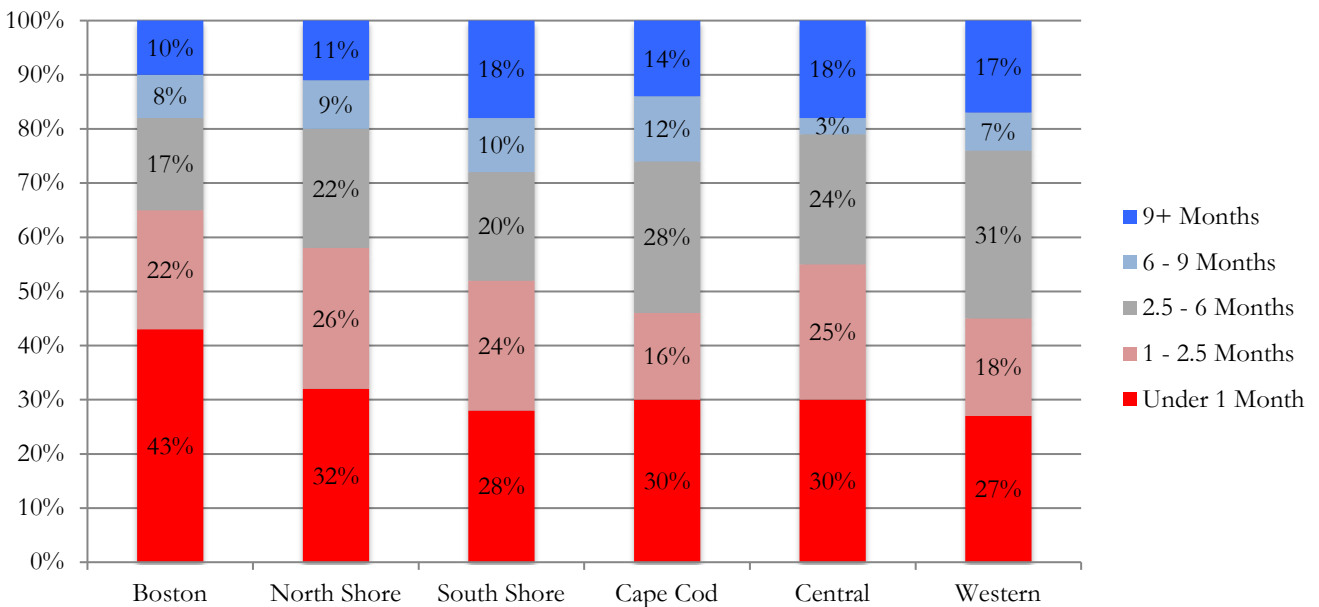
Despite the increases in liquidity that large organizations experienced between 2009 and 2014, the numbers match a concerning national trend in the arts administration community. As mentioned in the context section above, the Nonprofit Finance Fund reported in 2014 that 47 percent of nonprofit arts organizations in their sample ranked “achieving long-term financial sustainability” as their primary challenge, which was far greater than any other obstacle (18). Another 27 percent reported that developing cash reserves or having a stable cash flow was their primary challenge. Figure 5 shows that these challenges are also very relevant to organizations in Massachusetts.

It should also be highlighted that in every year, large and very large organizations had much less cash on hand than very small to medium organizations. Regression analysis shows that there are statistically significant differences between very small organizations and all other budget sizes (see Table 1 of the Appendix for detailed regression output). Although nationally, small nonprofit arts organizations generally have less liquidity than large ones, the DataArts data from 2009 - 2014

mirror a finding from the Human Services Council of New York: very large nonprofit organizations often “have no more than three months of cash reserves” and have significantly less liquidity than smaller organizations (Human Services Council, 2016: 3). This difference is often driven by the fact that larger arts organizations underfund indirect costs such as infrastructure or expenses that benefit more than one project. In other words, they tend to focus on day-to-day operations as opposed to the larger picture (Eden et al., 1986). Fully exploring this observation would require further research, but the months cash on hand figures point to a potential liquidity problem among large nonprofit arts organizations in Massachusetts.

A final note on the months cash on hand figures is that organizations in Boston have statistically significantly lower amounts of available cash than the South Shore Region, Cape Cod, and Western Massachusetts while controlling for budget size and organization type according to regression analysis, (see Table 1 of the Appendix). As Figure 6 shows, 43 percent of nonprofit arts organizations in Boston have one month of cash on hand or less, compared to just 28 percent on the South Shore, 30 percent on Cape Cod, and 27 percent in Western Massachusetts.

**Figure 6. Months Cash on Hand by Region**

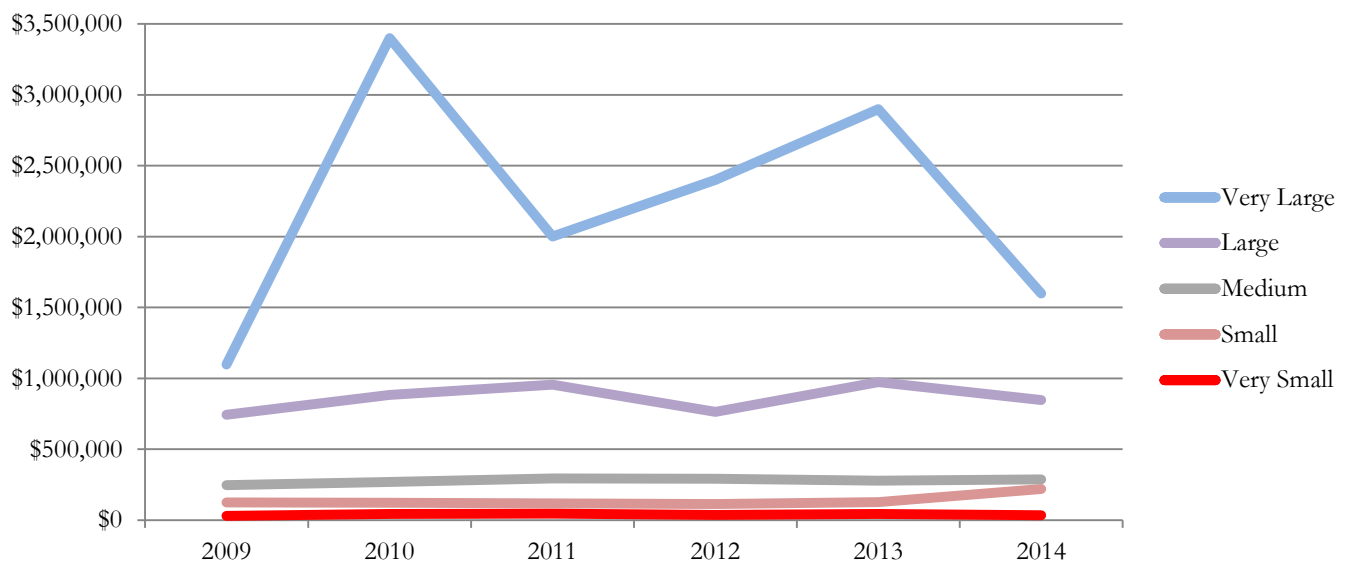


Source: DataArts, 2015

### Total Revenue and Employment

Before turning to common-sized ratios and more in-depth figures on the diversification of arts nonprofit organizations' revenue streams and asset distributions, it is important to first address total employment and total revenue as a foundation for this analysis. The DataArts data show that total revenues for arts nonprofits in Massachusetts have grown slightly since 2009, but many organizations experienced a slight drop between 2013 and 2014. This finding is consistent with the Nonprofit Finance Fund's 2014 Arts and Culture State of the Nonprofit Sector Survey, which reported a decline in total revenues for arts organizations between 2013 and 2014. Although 2014 was a financially stable year, a drop in the business cycle did occur, which appears to have negatively impacted nonprofit arts organizations, particularly large and very large ones.

**Figure 7. Mean of Total Revenue by Budget Size, 2009 – 2014**

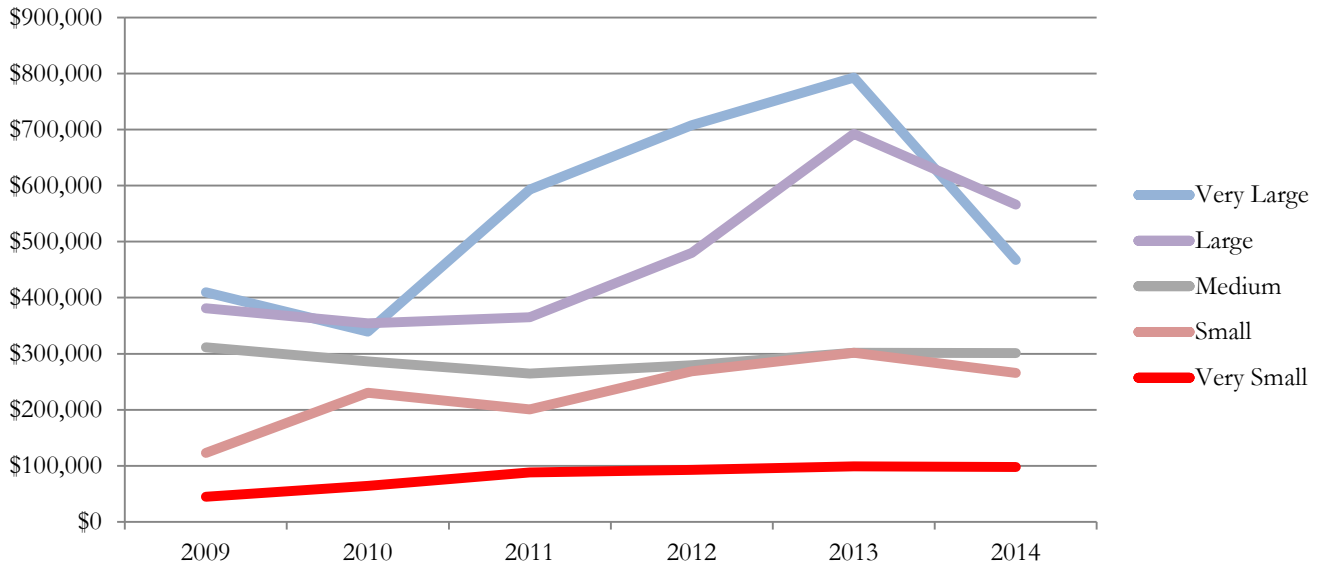


Source: DataArts, 2015

As Figure 8 shows, this decline in total revenue was also strongly associated with a steep decline in salaries between 2013 and 2014 among all budget categories except very small organizations. The DataArts data show, for example, that large and very large organizations spent about \$100,000 less on salaries for a mean of about 25 – 30 employees. Although very small, small,

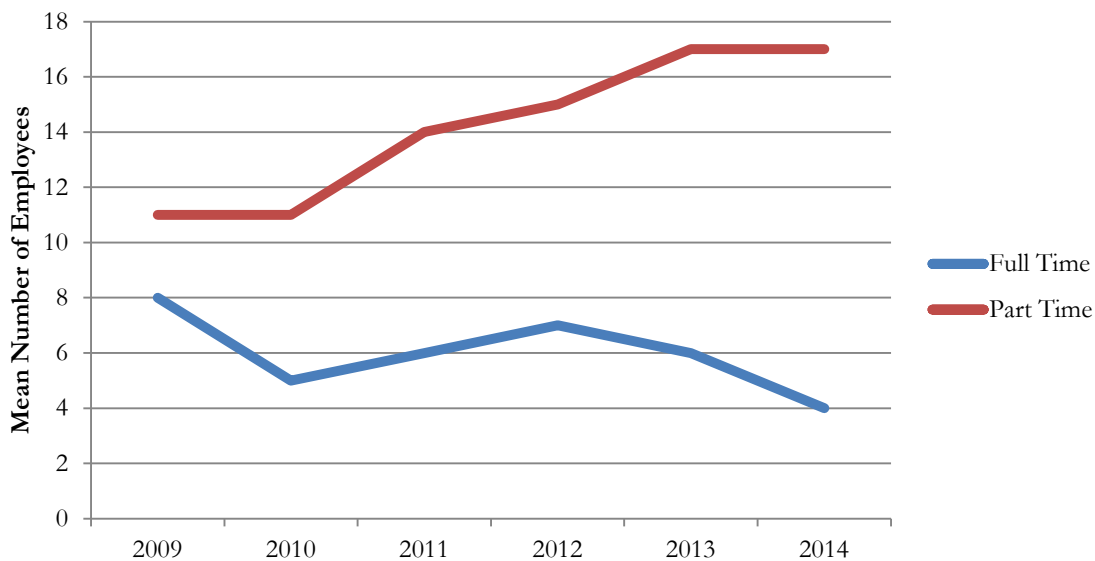
and medium organizations employ far less than that (between 2 and 15 on average), they also decreased salaries slightly between this period.

**Figure 8. Mean Salaries by Budget Size, 2009 – 2014**



Additionally, as Figure 9 shows, there was a shift across all budget sizes and organization types from full time employment in 2013 toward increased part time employment in 2014. This indicates Massachusetts’ arts nonprofit organizations’ high reactivity to economic conditions and hints at their tendency to cut full time personnel more than physical infrastructure during economic downturns.

**Figure 9. Mean Full Time v. Part Time Employment 2009 - 2014**



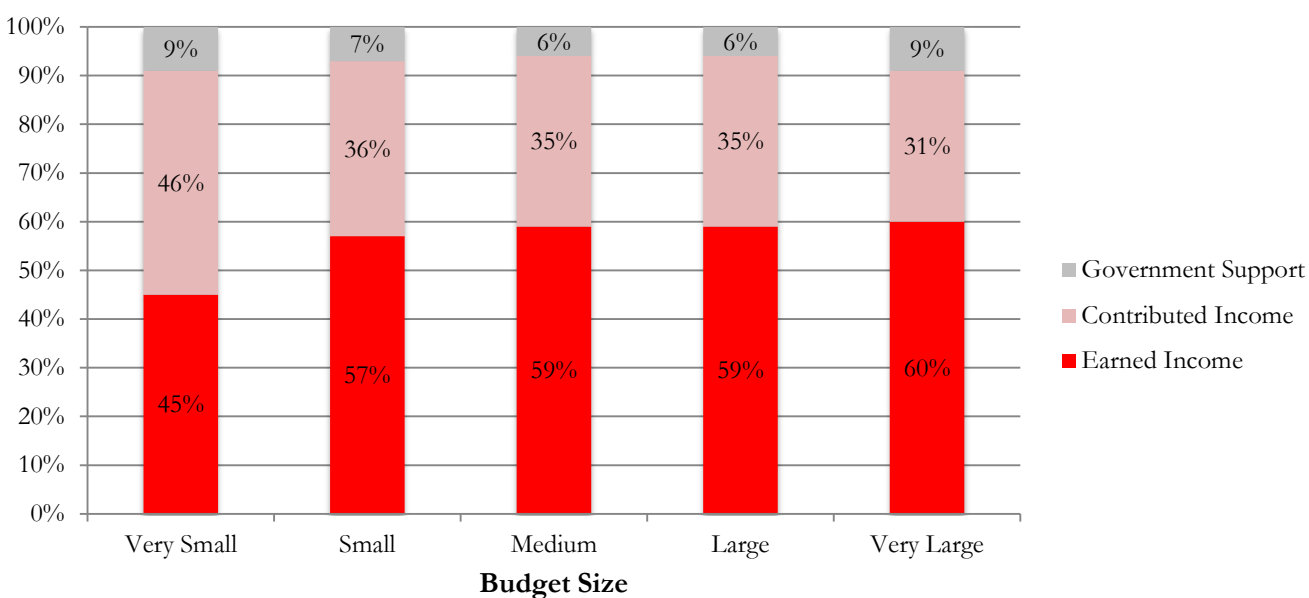


## Findings: Common-Sized Ratios

### *Arts Nonprofits' Revenue Sources*

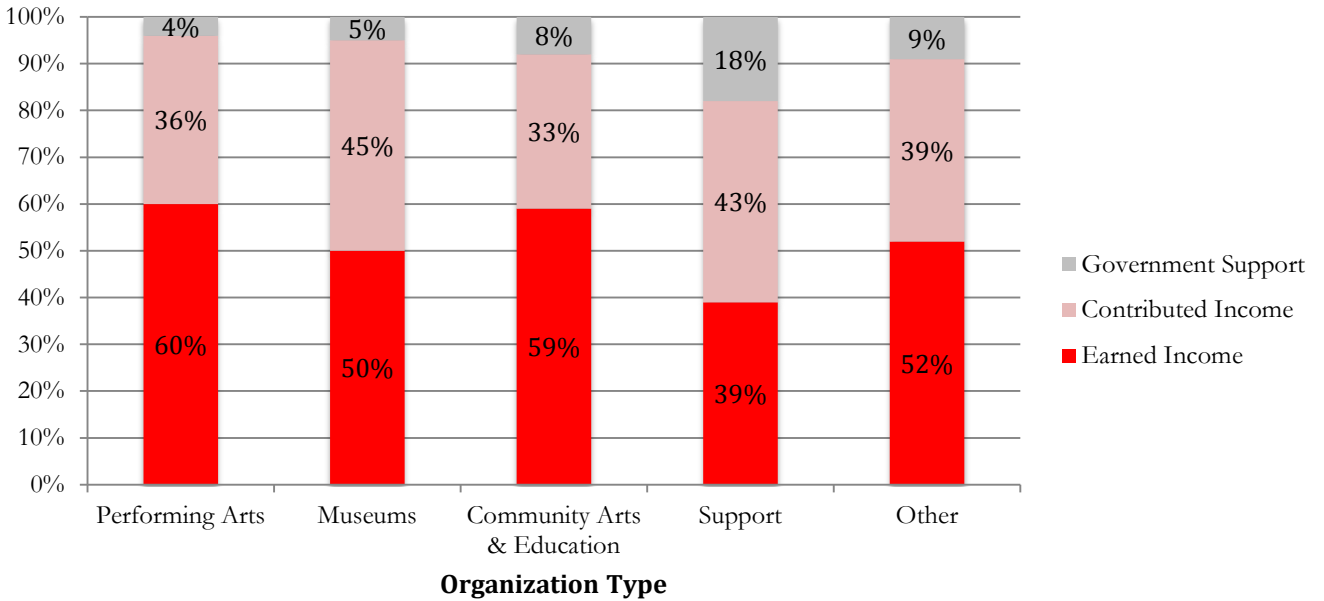
Determining where nonprofit arts organizations in Massachusetts get their revenue is an important next step in understanding their financial health. As mentioned above, the Boston Foundation recently reported that the observed reliance on individual contributions among arts nonprofits' revenue streams is a cause for concern. Less diversification in funding streams limits the risk nonprofit organizations will take, thus potentially diminishing their character, uniqueness, and ultimately their sustainability. The analysis below supports this result, but also put it into perspective. As Figure 10 shows, although contributed income accounts for one-third or more of organizations' revenue sources, earned income is still the primary source of revenue for most nonprofit arts organizations in Massachusetts. The lack of diversification in contributed revenue is particularly observable for performing arts organizations and museums with low amounts of earned income, namely those with budgets less than \$50,000 (see Figure 11). Indeed, it appears that very small arts organizations get slightly more revenue from contributed sources than from earned income.

**Figure 10. Distribution of Overall Revenue Sources by Budget Size**



*Source: DataArts, 2015*

**Figure 11. Distribution of Overall Revenue Sources by Organization Type**



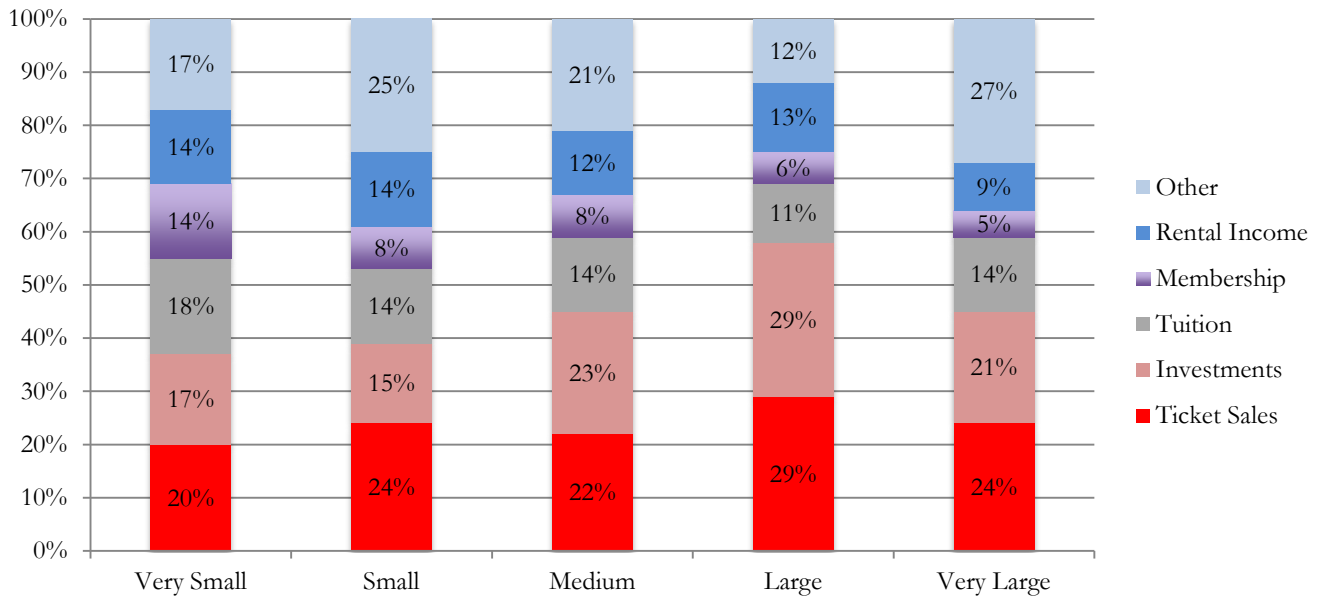
*Source: DataArts, 2015*

While Figures 10 and 11 describe the overall distribution of nonprofit arts organizations' revenue sources, understanding the sub-distribution of each of these three sources allows for a more nuanced analysis. The following three sections describe the areas within these three revenue sources.

### **Earned Income**

Between 2009 and 2014, the largest portion of most arts organizations' total revenue came from earned income. Figures 12 and 13 display the main factors behind earned income in Massachusetts' arts nonprofits. One of the most statistically significant differences (see Table 2 of the Appendix for full regression output) occurs between budget sizes on membership revenue. The smallest organizations in the dataset between 2009 and 2014 had the highest share of membership revenue while controlling for regional differences and organization types. This may reflect a wide presence of formal membership structures among small organizations. With regard to differences between organization types, and less surprisingly due to their respective missions, investment income is higher for support organizations and tuition is higher for education-oriented organizations.

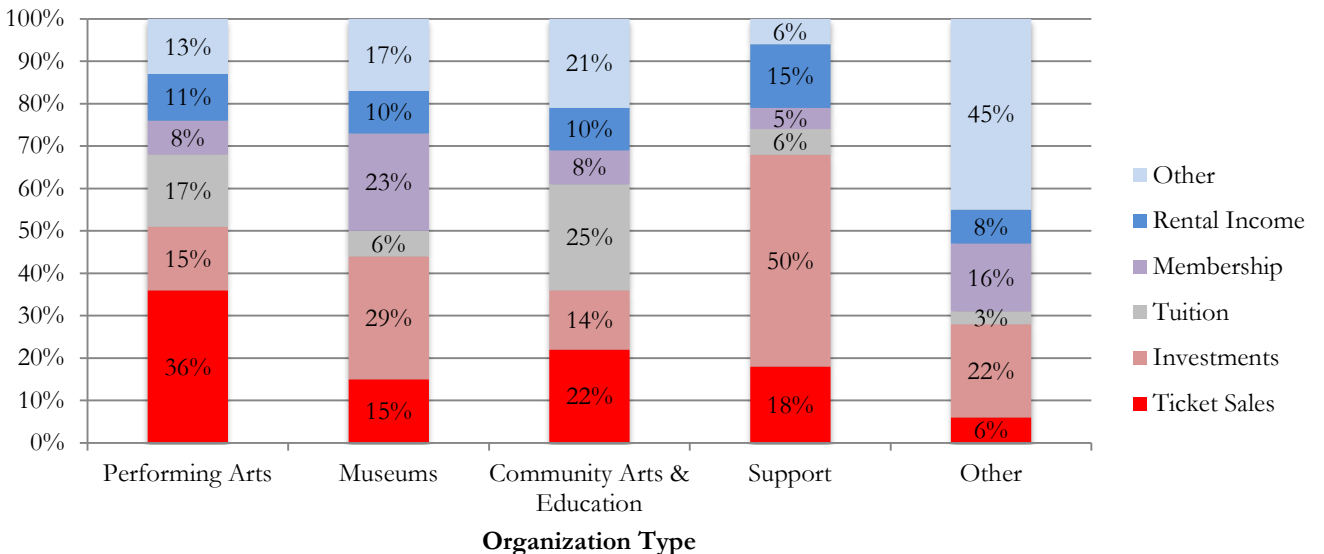
**Figure 12. Distribution of Earned Income by Budget Size**



Source: DataArts, 2015

Note: "Other" earned income includes performance subscriptions, fees and merchandise, contracted service performance fees, royalties rights, advertising revenue, and sponsorship.

**Figure 13. Distribution of Earned Income by Organization Type**



Source: DataArts, 2015

Overall, arts nonprofit organizations in Massachusetts earned their income from a relatively diverse set of activities between 2009 and 2014. Moreover, since 2009 organizations of all budget

sizes have had relatively stable levels of earned income. Very small organizations in particular had a strong showing in 2014, boosting earned income to 53 percent of total revenue, which is 8 percent higher than the mean over all six years. Large organizations also experienced an increase in earned income relative to total revenues between 2013 and 2014. That said, the means of earned income as percentages of total revenues for all other budget cohorts dropped between 2013 and 2014.

## **Contributed Income**

### *Individual Giving*

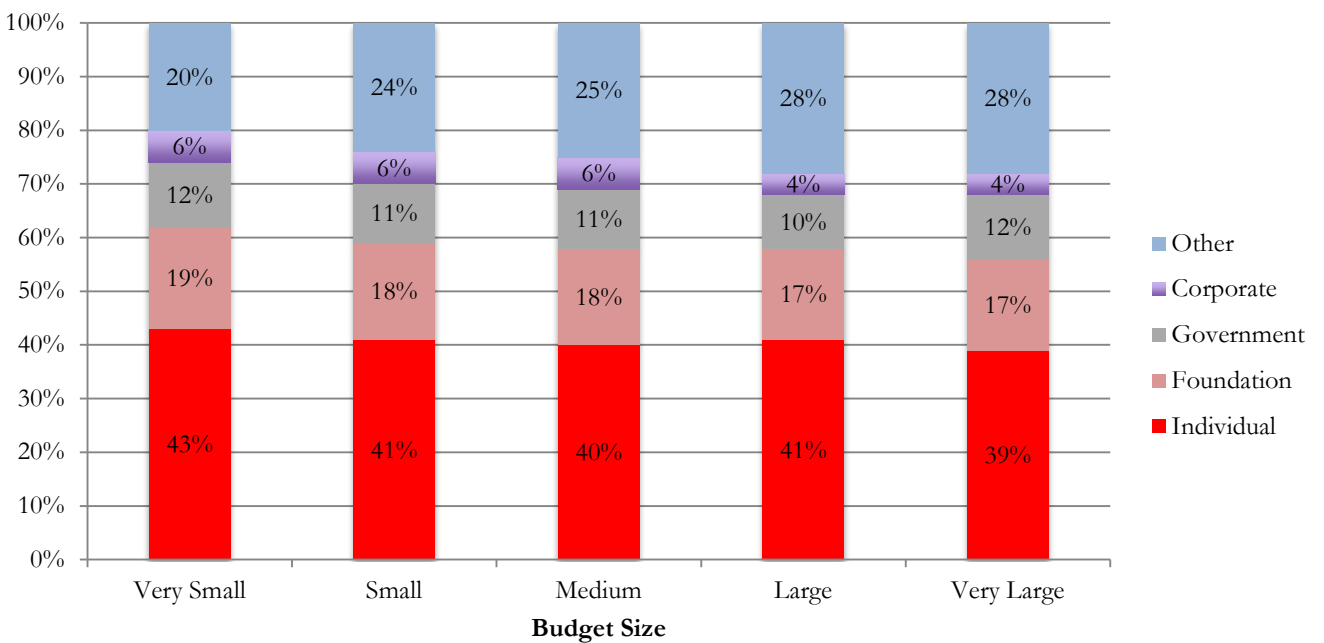
As Figures 14 and 15 show, nonprofits arts organizations in Massachusetts rely heavily on individual giving as a source of revenue. This finding is consistent across all organization types with the only exception being arts service organizations, which receive about 28 percent of their contributed revenue from individual donors.

The findings on contributed revenue differ somewhat from TDC's analysis. While TDC's study found that individual donations account for 50 percent of all contributed income (Koo and Kurtis, 2016:29), the figures presented here show that individual contributions hover around 40 percent of contributed income for organizations of all budget sizes when aggregated between 2009 and 2014. This difference may be driven by the fact that 2014 data show that the mean of individual contributions as a percentage of total contributed revenue among all budget sizes was 39 percent, and was higher in 2012 (the year on which TDC reported). Additionally, the Museum of Fine Arts, Boston Symphony Orchestra, and WGBH (the three largest organizations that TDC analyzes in their report), are not part of the DataArts dataset analyzed here.

Between 2009 and 2014, one of the most statistically significant differences in the concentration of individual donations occurs between regions (see Table 3 of the Appendix for detailed regression output). In western Massachusetts, an average of 46 percent of their contributed revenue came from individual donors between 2009 and 2014 compared to 31 percent in Boston. TDC's report provides insight into the implications of such a high concentration of revenue coming

from individual donations. Because of larger trends showing that the population of Massachusetts will not grow substantially in the near future and that the younger generation of donors prefers to support a wide array of causes, organizations across the state may find it challenging to build loyalty, thus calling into question the sustainability of the current funding portfolios (Koo and Kurtis, 2016: 38). Quickly changing individual tastes magnify these challenges. The figures below provide evidence that this may not only be a concern in Boston but also across the state.

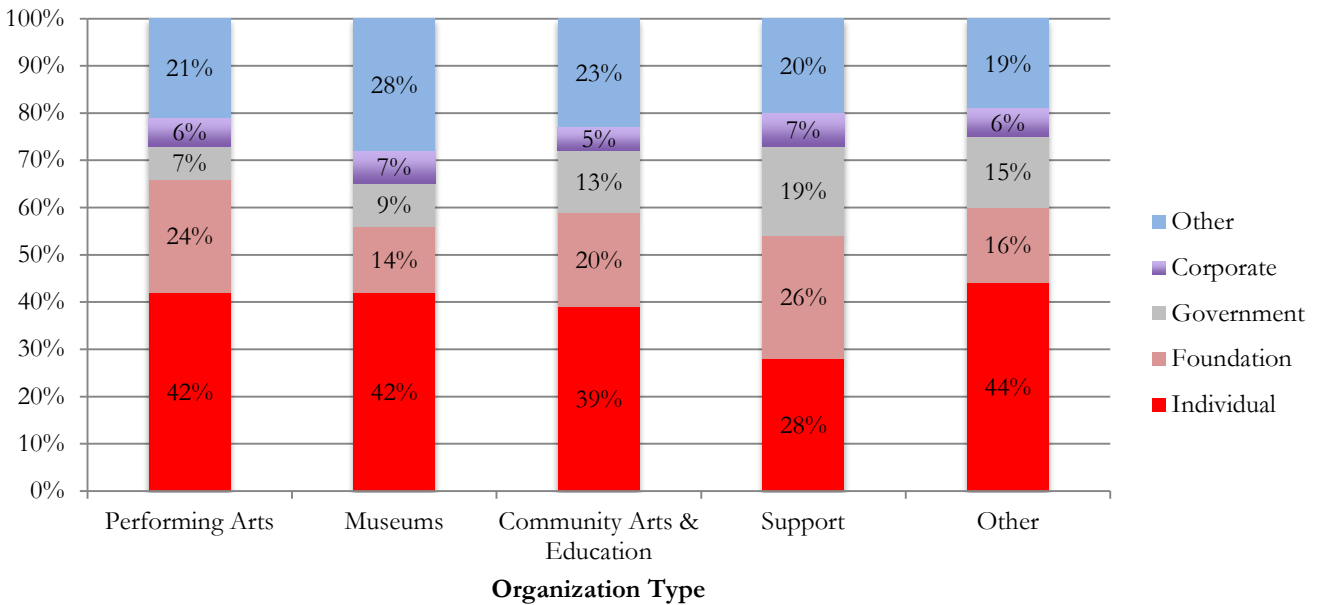
**Figure 14. Distribution of Contributed Revenue by Budget Size**



*Source: DataArts 2015*

*Note: "Other" contributed revenue includes special event support, in kind support, and support from parent organizations*

**Figure 15. Distribution of Contributed Income by Organization Type**



*Source: DataArts, 2015*

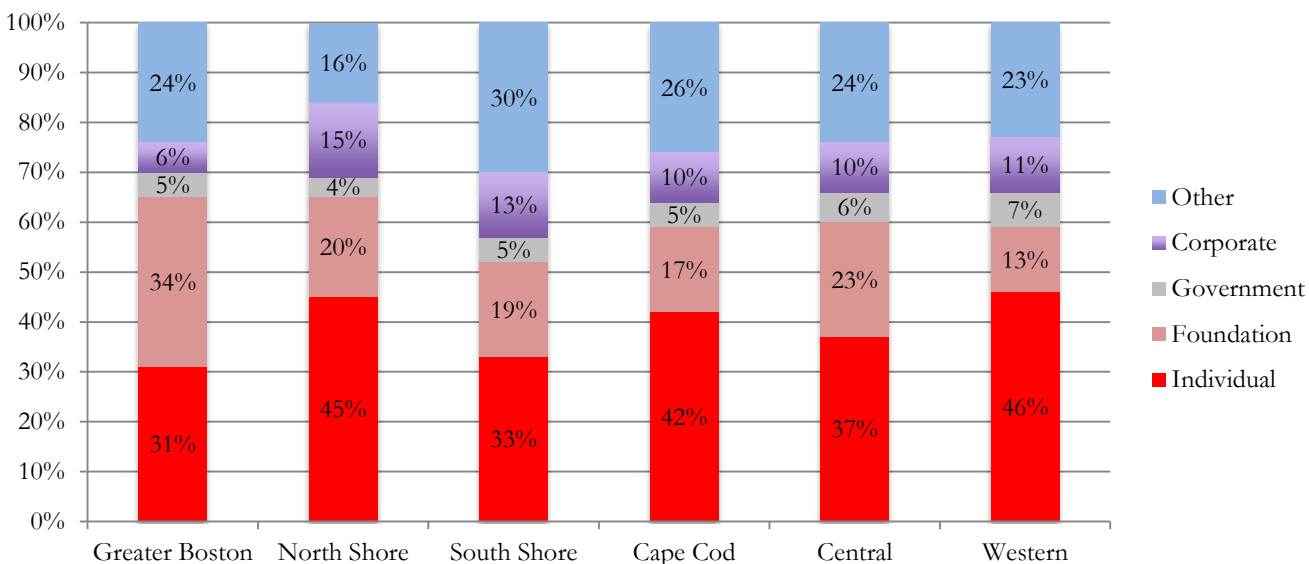
*Foundation Giving and Corporate Support*

Many foundations and corporations, both national and local, have a strong interest in supporting the arts as part of their community-building efforts and due to corporate social responsibility (Lawrence and Mukai, 2014). Although there are few differences with respect to corporate support across budget categories, organization types, and regions within the dataset, Figure 14 shows that organizations with budgets of less than \$50,000 rely more on foundation giving than any other organizational budget size. This may be because these organizations lack investment income (see Figure 12) and the scale to generate high levels of earned income.

However, as with individual donations, Figure 16 shows that the most statistically significant factor explaining differences in foundation giving is regional, with organizations in Boston receiving far more foundation giving than every other region. Although TDC reports that foundation funding for the arts is low in Boston compared to San Francisco, New York, and Cleveland (33), this finding

reflects the observation that the Boston area is known for its supportive foundation community relative to the rest of the state (Greater Philadelphia Cultural Alliance, 2015: 29).

**Figure 16. Distribution of Contributed Revenue by Region**



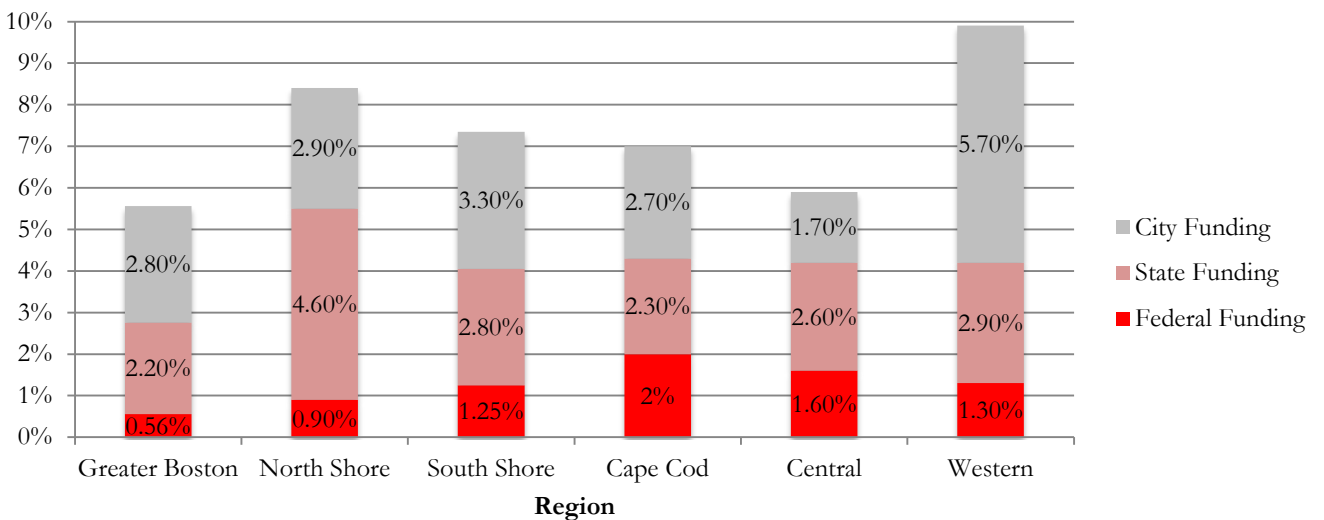
Source: DataArts, 2015

### Government Funding

Although government support comprises only about 10 percent of nonprofit arts organizations' funding portfolio (see Figures 10 and 11), it is nonetheless an invaluable resource for arts nonprofits, especially those with small budgets. Figure 17 provides the sub-distribution of different types of government support. Between 2009 and 2014, city government support averaged 3.5 percent of total revenue, state government support averaged 2.8 percent, and federal government support averaged just 1.25 percent. As Figure 17 shows, the distribution and amount of public funding varies at statistically significant levels by region. Organizations in western Massachusetts received much more in city government funding between 2009 and 2014 (an average of 5.7 percent of total revenue) than those in Boston (an average of 2.8 percent of total revenue). In addition to the absence of many large foundations and corporations in western Massachusetts, this may be reflective of western Massachusetts' strong creative economy advocacy coalition and Nonprofit Business

Network. This organization produces reports on the economic impact of each nonprofit sector, including the arts, which is a powerful tool to present to local public officials (Berkshire Eagle, 2008). These types of organizations exist in other regions of the state, but according to Nonprofit Quarterly, citing Stephen Sheppard of Williams College, “the only area in the United States that has higher levels of [nonprofit] arts and cultural expenditures per capita than Berkshire is metro Washington D.C. (McCambridge, 2015).

**Figure 17. Government Support as Percentage of Total Revenue by Region**



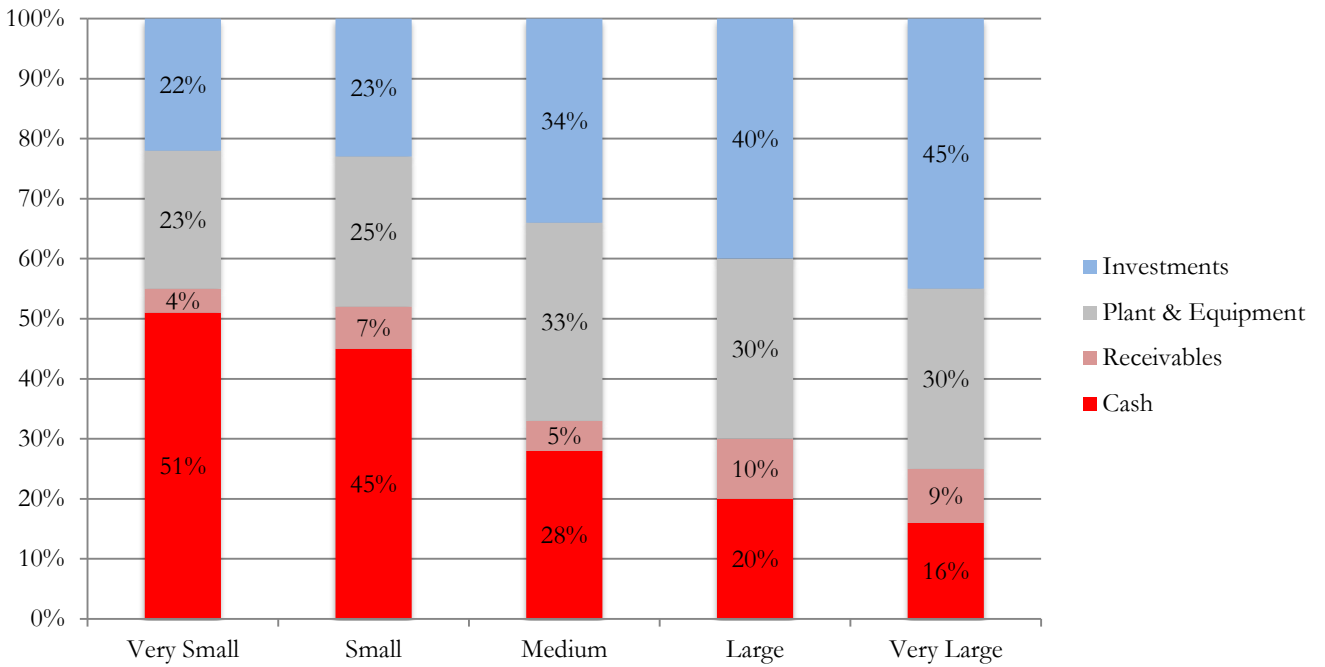
*Source: DataArts, 2015*

### Asset Allocations

Finally, as discussed in the literature review, an analysis of nonprofit arts organizations’ asset distributions can serve as a measure of their financial sustainability. To that end, the figures below provide a snapshot of Massachusetts arts nonprofit organizations’ asset allocations between 2009 and 2014.

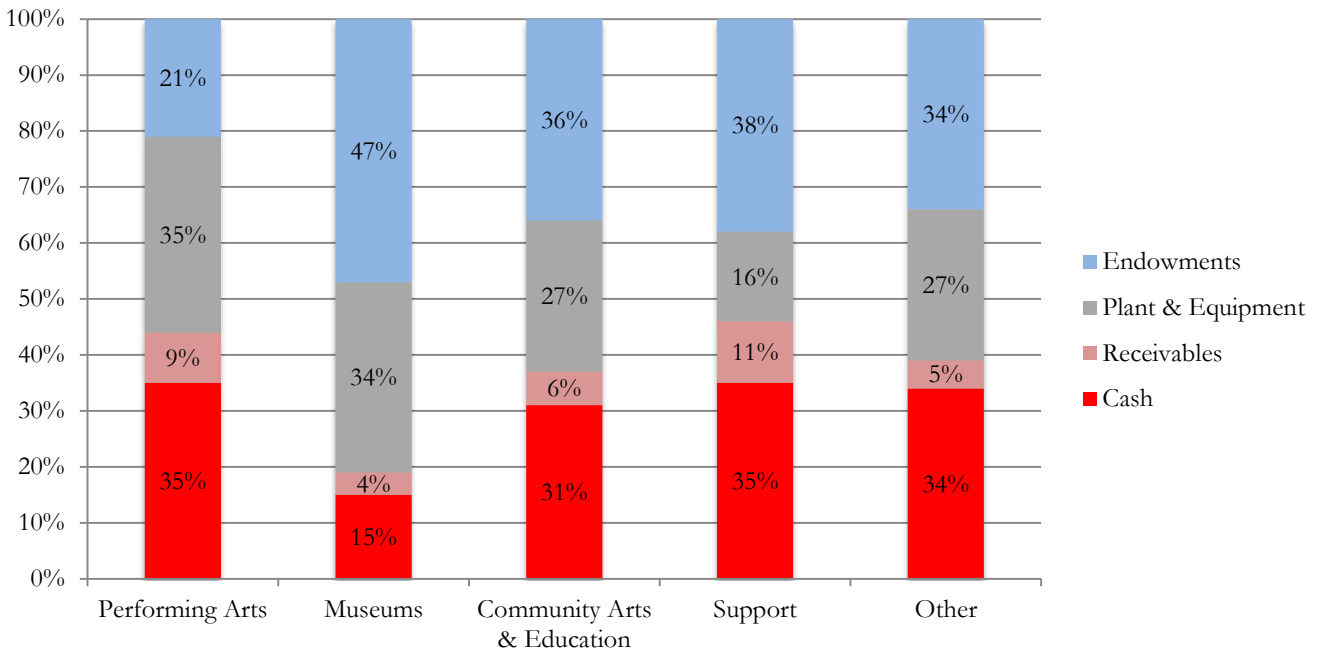


**Figure 18. Asset Allocation by Budget Size**



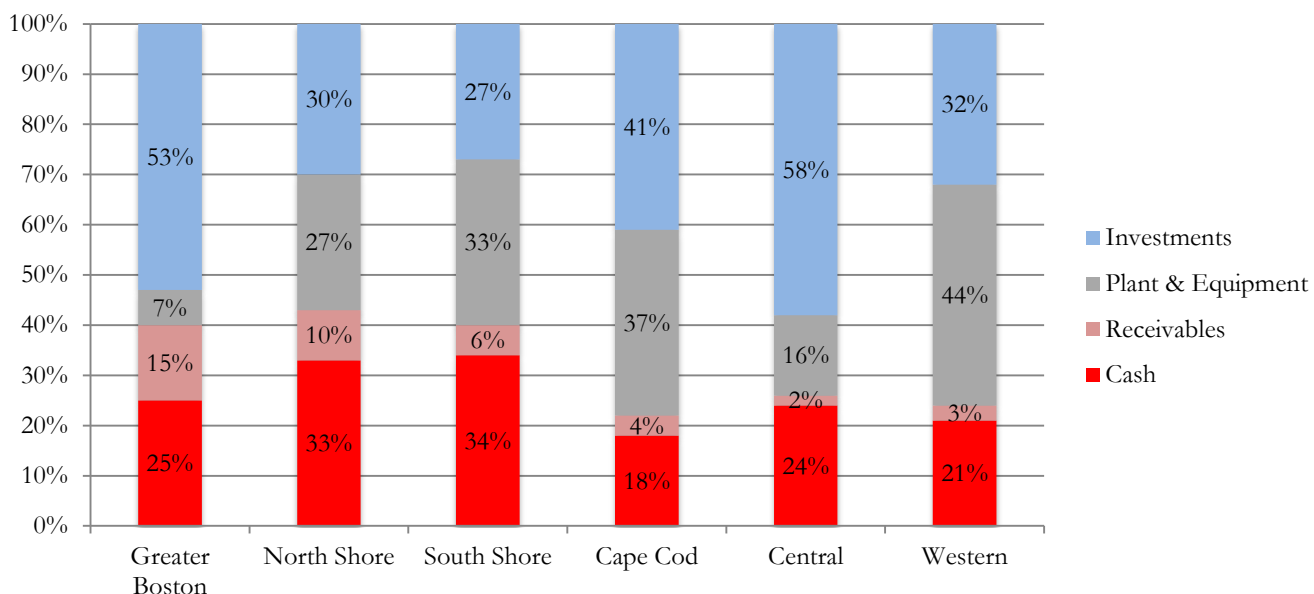
Source: DataArts, 2015

**Figure 19. Asset Allocation by Organization Type**



Source: DataArts, 2015

**Figure 20. Asset Allocation by Region**



*Source: DataArts, 2015*

Figures 18, 19, and 20 reinforce the observation that investments constitute a large proportion of arts nonprofits’ asset allocations in Massachusetts, particularly museums and organizations with large budgets. This could be problematic partly because nonprofit organizations’ donors often set the terms for their spending (Powell and Steinberg, 2006: 121). For example, due to the conditions in organizations’ charters, gifts, or endowments they may be required to limit or prohibit admissions charges (Rosett, 1991: 144). This may be one explanatory factor behind the observation that less than 20 percent of museums’ asset allocations were comprised of cash between 2009 and 2014.

Another takeaway from Figure 19 is that performing arts organizations in Massachusetts have relatively low amounts invested in plant and equipment (about 40 percent) compared to what the Nonprofit Finance Fund considers to be the average (about 60 percent) (Nonprofit Finance Fund, 2010: 5). Although this may be due to the fact that the “performing arts” category covers a wide range of diverse organizations (e.g. dance and theater) whose board and staff members may not invest the same as one another, it nonetheless shows that performing arts organizations in

Massachusetts invest less than 40 percent of their assets in their physical performances spaces. This is most relevant to the risk calculation that these organizations must make. As the Nonprofit Finance Fund writes, for organizations with low investments in physical infrastructure, during difficult financial times it “may be more possible to lay off personnel temporarily than to reduce fixed cost of real estate. Its risk becomes, much more narrowly, audience risk” (2010: 7).

A final highlight from the figures on asset allocations is that there is a strong and negative correlation between budget size and the percentage of assets organizations keep in cash. Larger organizations have statistically significantly less assets in cash and more assets in investments than smaller ones (see Table 4 of the Appendix). It is generally true that larger organizations may have more steady cash flow and may therefore be able to count on cash from investments to cover expenses. However, Figure 18 shows that on average there is no proportional plant and equipment among large and very large organizations arts nonprofit organizations in Massachusetts to make up for the low amounts of cash. Rather, between 40 and 45 percent of large and very large organizations’ asset mixes are comprised of investments, which were calculated through combining various types of endowments, namely term endowments and board endowments. Although it is not depicted here, these numbers remained the same even after removing museums from the calculation, which Figure 19 shows have the highest portion of their assets in investments.

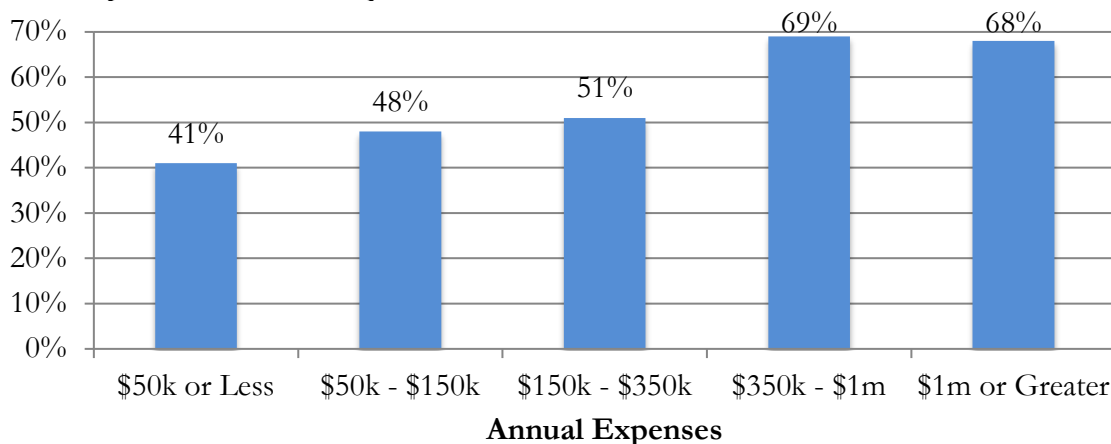
Thus, it appears that for nonprofit arts organizations, budget size is directly and negatively correlated with the amount of total assets in cash and positively correlated with the amount of total assets in investments. This appears to mirror the model that many universities use: high risk/high return investment policies are logical for long-term investors, which many large organizations are given their capacity. However, this comes at the expense of short-term liquidity, which Keating writes is required even for organizations with high endowments because high endowments come with short-term liabilities, namely operating expenses (2010). As stated previously, the Boston Foundation considers it a best practice for organizations to have 3 – 6 months of cash on hand to

cover short-term expenses, and as Figure 6 shows, organizations in the sample with budgets of over \$1 million consistently had less than four months *on average* between 2009 and 2014. This means that many organizations had less than that.

It is certainly the case that many successful non-arts organizations, namely universities, have extremely low amounts of their assets invested in cash with some even in negative amounts (Keating, 2010). Compared to these figures, the amount of cash assets among large arts nonprofit organizations is not as surprising. However, during economic downturns, when assets such as endowment investments decline, having cash is an enormous strength because it allows organizations to maintain liquidity and a diversified portfolio (Miller, 2008). On the other end of the spectrum, it is evident that very small organizations have over half of their assets distributed as cash. This could also be problematic because cash does not yield as much return on investment.

Although there is no “correct” distribution of cash vis-à-vis investments,<sup>1</sup> Figures 21 and 22 show that a greater percentage of large nonprofit arts organizations in Massachusetts have less than three months of cash on hand than what the Nonprofit Finance Fund found to be the national average in 2014.

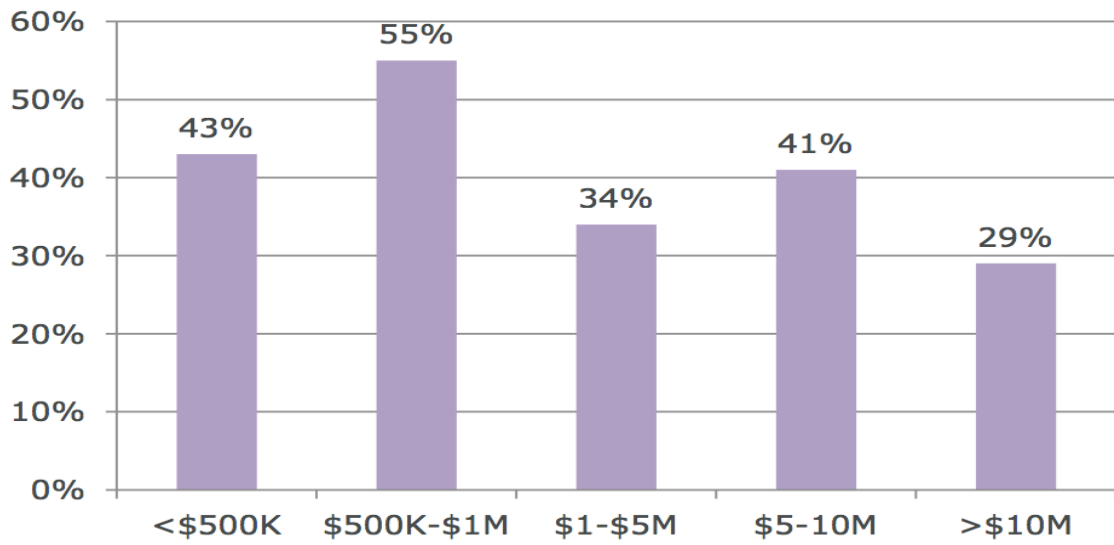
**Figure 21. Percent of Arts Organizations Reporting Less than 3 Months Cash on Hand (in Massachusetts) in 2014**



<sup>1</sup> Asset allocation is more a reflection of organizations’ risk calculation and perception of their own long-term sustainability than actual financial danger or health (Greenlee and Trussel, 2000).

Source: DataArts, 2015

**Figure 22. Percent of Arts Organizations Reporting Less than 3 Months Cash on Hand (Nationally) in 2014**



Annual Expenses

*Source: Nonprofit Finance Fund (2014). 2014 State of the Nonprofit Sector Survey Arts & Culture, Arts Feature.*

Although the budget categories do not line up between the two figures due to few organizations with budgets over \$1 million represented in the DataArts sample (see Tables 1 and 3), there is a clear difference between large nonprofit arts organizations' liquidity levels in Massachusetts and those in the rest of the country.

## **Recommendations**

The recommendations below are suggestions related to how the MCC can further facilitate the financial, bureaucratic, and managerial stability that nonprofit arts organizations need in order to focus on their work (Sutton, 2015). Specifically, each recommendation focuses on how the MCC may be able to foster stronger long-term financial planning for nonprofit organizations. The theory of action motivating each recommendation is that with long-term financial planning, organizations could avoid the volatility of personnel-based risk, add diversity to their assets, and more efficiently budget to withstand economic downturns in the future. A final note on the motivation behind the recommendations is that they were chosen with the MCC's funding volatility in mind. Thus, each is likely to be administratively feasible given the agency's current resources.

**Recommendation 1:** Design and execute a needs assessment specifically pertaining to what financial technical assistance nonprofit arts organizations need to recognize short-term and long-term financial dangers, strategically use resources, and plan investments (Human Services Council, 2016: 25).

The data show that nearly one-third of all organizations across Massachusetts have one month or less of cash on hand. According to the analyses presented here, it is clear based on arts organizations' balance sheets and employment figures that many lack the organizational capacity to assess financial risk and strategically plan investment portfolios. Funding or technical assistance geared specifically toward this purpose would allow organizations, especially those with small budgets, to diversify their portfolios and potentially their revenue streams. This is a first step toward achieving long-term financial sustainability.

A first action step toward this goal is to organize a needs assessment, which is a research project designed to learn about the nuanced issues a group of people or organizations are facing in order to design effective public programs (McCawley, 2009: 3). This can be done using a variety of methods, including interviews, surveys, focus groups, and working groups. A more qualitative analysis that directly involves the various constituencies supported by the MCC will allow for a clearer understanding of what specific tools, programs, and types of technical assistance different nonprofit organizations would find useful.

**Recommendation 2:** Consider instituting grant programs or other incentives that encourage the creation of cooperative frameworks for arts management, perhaps based on the model outlined in the report that helped to create ArtsPool in New York: [Collective Insourcing: A Systemic Approach to Arts Management](#).

ArtsPool is an organization that provides a wide array of financial and administrative services to nonprofit organizations including but not limited to processing payrolls, completing and filing financial statements, and completing new hire reporting. If established in Massachusetts, such an organization may allow for staff members of organizations primarily focused on the production of artwork and performances to spend more time on programming and production, which is a challenge for smaller and newly formed nonprofit organizations in particular. As the figures on employment show, organizations with budgets of less than \$50,000 have an average of about four total staff members plus volunteers. These employees are often forced to spend a disproportionate amount of time working on administrative duties.

Of course, this is just one example of how cooperation can preserve the financial sustainability of nonprofit arts organizations. There are multiple ways that nonprofit arts organizations can strategically collaborate with both other arts organizations and non-arts businesses. The MCC should encourage, perhaps through giving bonus points on applications, projects that integrate these types of activities into their initiatives or proposals.

**Recommendation 3:** Consider producing an online information clearinghouse with resources for external financial assistance specifically geared toward nonprofit organizations in the Cultural Investment Portfolio.

Many nonprofit arts organizations may simply not know where to look for long-term financial planning assistance. The close relationship the MCC has with organizations in the Cultural Investment Portfolio is an opportunity to provide this information, perhaps through an online webpage. The Nonprofit Finance Fund's [Systems Replacement Plan](#), for example, provides a detailed review of a nonprofit's building systems, and [Building for the Future](#) offers a matching savings program that prevents deferred maintenance financial crises by funding building reserves. Providing this information all in one place on an easily accessible platform may spur nonprofit arts organizations to take a closer look at their financial planning efforts. Additionally, making organizations aware of some of the common problems nonprofit organizations across the state are having may motivate them to target those problems as priorities. If organizations have a goal, they will likely work to meet that goal.

## **Conclusion**

Overall, nonprofit arts organizations across Massachusetts have shown signs of recovery since the financial recession of 2009. The organizations represented in the sample had an average of 5.8 months of cash on hand in 2014 compared to an average of 4 months in 2009, boosted revenues, increased salaries and overall employment, and have consistently spent the majority of their budgets on programs. Additionally, 52 percent of organizations in the sample reported surpluses in 2014, compared to just 36 percent in 2009.

However, many organizations remain financially distressed. High revenue concentrations, low cash flows, and negative surplus margins are significantly associated with financially vulnerable nonprofit organizations (Greenlee and Trussel, 2000: 204). As this report has shown, about 40 percent of contributed revenue for arts organizations in Massachusetts comes from individual donors and investments comprise by far the highest proportion of nearly all organizations' asset



distributions, pointing to high revenue concentration. It also found that about one-third of arts organizations had less than one month of cash on hand between 2009 and 2014, pointing to low cash flows. Collectively, these issues indicate that arts organizations across Massachusetts may benefit from programs that assist with long-term financial planning. However, the aggregated quantitative analysis that this report has provided should first be complemented by more qualitative research studies in the future to determine what specific types of financial tools and services these organizations would find helpful. This is a first step in helping the organizations in the Cultural Investment Portfolio that may be struggling with these issues get on track toward long-term financial sustainability.

## Appendix

**Table 1: Regression Coefficients for Surplus Margins, Program Expenses, and Months Cash on Hand**

	Surplus Margin	Program Expenses	Months Cash on Hand
<b>Budget Size</b>			
Very Small (base)	-	-	-
Small	.04 (.08)	-1.15 (2.5)	-1.6** (.88)
Medium	.13 (.08)	4.5** (2.6)	-2.9*** (.83)
Large	.11 (.09)	6.3*** (2.6)	-4.1*** (.82)
Very Large	.02	7.3***	-4.7***

	(.08)	(2.5)	(.81)
<b>Region</b>			
Boston (base)	-	-	-
North Shore	.003 (.07)	-7.8*** (2.3)	.12 (.67)
South Shore	.20*** (.09)	-16.3*** (3.1)	1.4* (.89)
Cape Cod	.14** (.08)	-16.1*** (2.7)	1.1* (.76)
Central	.02 (.09)	-4.1 (3.2)	.28 (.93)
Western	.04 (.08)	-15.8*** (2.7)	1.4** (.76)
<b>Organization Type</b>			
Community Arts (base)	-	-	-
Performing Arts	.003 (.07)	-.24 (2.2)	-.08 (.64)
Visual Arts	.003 (.06)	-4.3*** (2.1)	-.23 (.58)
Support	.12 (.09)	-4.5* (3.2)	.17 (.98)
Other	-.12 (.06)	-11.4*** (2.1)	.77 (.60)
<b>Constant</b>	-.17 (.09)	68.9 (2.8)	6.9 (.95)
<b>R-Squared</b>	.018	.12	.084
<b>Observations</b>	1,008	1,008	1,008
*** p < .05    ** p < .10    * p < .20 Note: Standard errors are in parentheses			

**Table 2: Regression Coefficients for Earned Income Components as Percentage of Total Earned Income**

	Ticket Sales	Investments	Tuition	Membership	Rental Income
<b>Budget Size</b>					
Very Small (base)	-	-	-	-	-
Small	.31 (1.7)	3.2*** (1.6)	.80 (1.7)	-3.3*** (.93)	6.1*** (3.1)
Medium	.78 (1.7)	2.5*** (1.1)	3.2*** (1.7)	-4.1*** (.93)	3.1 (3.0)
Large	2.3* (1.7)	2.2*** (1.1)	6.5*** (1.7)	-5.4*** (.93)	2.0 (3.0)

	(1.7)	(1.1)	(1.7)	(.94)	(3.1)
Very Large	6.4*** (1.7)	4.6*** (1.1)	8.3*** (1.7)	-5.3*** (.91)	.27 (2.9)
<b>Region</b>					
Boston (base)	-	-	-	-	-
North Shore	4.2*** (1.5)	-24 (.96)	-1.9* (1.5)	1.9*** (.84)	-1.7 (2.8)
South Shore	6.9*** (1.9)	1.4 (1.2)	-5.1*** (1.9)	-.18** (1.1)	-3.2 (3.6)
Cape Cod	6.5*** (1.8)	-10 (1.1)	-6.2*** (1.7)	1.6** (.98)	-.24 (3.2)
Central	10.3*** (2.1)	3.9*** (1.3)	-8.1*** (2.1)	3.4*** (1.1)	1.6 (3.7)
Western	6.9*** (1.8)	.38 (1.1)	-4.7*** (1.8)	1.1 (.98)	4.2* (3.2)
<b>Organization Type</b>					
Community Arts (base)	-	-	-	-	-
Performing Arts	5.6*** (1.4)	-1.3* (.89)	-3.2*** (1.4)	.22 (.78)	-1.1 (2.5)
Visual Arts	-10.6*** (1.4)	3.8* (.89)	-9.7*** (1.4)	2.7*** (.78)	4.2** (2.5)
Support	-2.05 (2.1)	4.5*** (1.3)	-10.7*** (2.1)	-1.6* (1.2)	.69 (3.8)
Other	-8.5*** (1.4)	2.4*** (.89)	-9.8*** (1.3)	5.6*** (.78)	.68 (2.5)
<b>Constant</b>	4.1 (1.8)	-1.3 (1.2)	11 (1.9)	5.53 (1.1)	1.9 (3.4)
<b>R-Squared</b>	.13	.06	.14	.10	.02
<b>Observations</b>	1,008	1,008	1,008	1,008	1,008
*** p < .05    ** p < .10    * p < .20 Note: Standard errors are in parentheses					

**Table 3: Regression Coefficients for Contributed Income Components as Percentage of Total Contributed Income**

	Individual	Corporate	Foundation	City Gov't	State Gov't	Federal Gov't
<b>Budget Size</b>						
Very Small (base)	-	-	-	-	-	-
Small	-2.8 (3.2)	-1.1 (1.3)	-3.3 (2.5)	2.1** (1.2)	2.3*** (.89)	.48 (.55)
Medium	.39 (3.3)	-2.0 (1.3)	-5.8 (2.5)	.89 (1.2)	.07 (.89)	.60 (.56)
Large	-6.6 (3.3)	-.09 (1.3)	-3.9 (2.5)	3.9*** (1.2)	.81 (.90)	1.2*** (.57)

Very Large	.72 (3.2)	-1.3 (1.3)	-8.4 (2.4)	.80 (1.2)	.32 (.87)	1.9*** (.54)
<b>Region</b>						
Boston (base)	-	-	-	-	-	-
North Shore	12.8*** (2.9)	-.95 (1.1)	-18.2*** (2.3)	2.3*** (1.1)	-.79 (.80)	-.89** (.50)
South Shore	.80 (3.8)	-.75 (1.5)	-25.4*** (2.9)	2.8*** (1.4)	.63 (1.1)	.25 (.64)
Cape Cod	13.2*** (3.4)	-.15 (1.4)	-21.2*** (2.6)	3.5*** (1.2)	-1.9 (.93)	-.74 (.58)
Central	5.9* (4.1)	.89 (1.6)	-8.5*** (3.1)	.88 (1.5)	-1.7 (1.1)	.35 (.69)
Western	14.7*** (3.4)	.26 (1.4)	-22.2*** (2.6)	6.4*** (1.2)	-1.1 (.93)	-.26 (.58)
<b>Organization Type</b>						
Community Arts (base)	-	-	-	-	-	-
Performing Arts	5.0** (2.7)	1.0 (1.1)	2.1 (2.1)	-3.3*** (.99)	-.29 (.75)	-.03 (.45)
Visual Arts	2.9 (2.7)	1.1 (1.1)	-3.0* (2.1)	-4.3*** (.98)	.52 (.74)	.28 (.46)
Support	-11 (4.1)	2.6 (1.6)	1.5 (3.2)	.96 (1.5)	3.8*** (1.2)	2.4*** (.70)
Other	5.5*** (2.7)	.14 (1.1)	-1.4 (2.1)	-3.2*** (.99)	1.3** (.74)	3.2*** (.46)
<b>Constant</b>	30.6 (3.7)	6.3 (1.5)	40.2 (2.8)	1.2 (1.3)	2.3 (.99)	-.07 (.62)
<b>R-Squared</b>	.06	.01	.13	.07	.03	.08
<b>Observations</b>	1,008	1,008	1,008	1,008	1,008	1,008
*** p < .05    ** p < .10    * p < .20 Note: Standard errors are in parentheses						

**Table 4: Regression Coefficients for Asset Allocations (as proportions of total assets)**

	Cash	Investments	Plant and Equipment	Accounts Receivable
<b>Budget Size</b>				
Very Small (base)	-	-	-	-
Small	-12.3*** (4.5)	18.7*** (8.1)	6.2 (5.7)	2.2 (2.7)
Medium	-29.7*** (4.5)	31.3*** (7.8)	17.7*** (5.5)	-1.2 (2.6)
Large	-36.1***	31.6***	9.5**	6.9***

	(4.4)	(7.5)	(5.3)	(2.5)
Very Large	-41.8*** (4.4)	48.5*** (7.5)	13.9*** (5.4)	6.2*** (2.5)
<b>Region</b>				
Boston (base)	-	-	-	-
North Shore	2.1 (3.5)	-30.5*** (6.1)	16.7*** (4.2)	-8.2*** (2.0)
South Shore	-1.1 (4.7)	-23.2*** (8.1)	28.6*** (5.7)	-8.9*** (2.7)
Cape Cod	-5.3 (3.9)	-16.3*** (6.7)	32.5*** (4.8)	-10.6*** (2.3)
Central	-4.9 (5.1)	11.3* (8.6)	14.5*** (6.1)	-12.5*** (2.9)
Western	-13.6*** (4.1)	-14.8*** (6.9)	40.5*** (4.9)	-11.0*** (2.3)
<b>Organization Type</b>				
Community Arts (base)	-	-	-	-
Performing Arts	3.9 (3.4)	-18.7*** (5.7)	12.2*** (4.1)	2.5* (1.9)
Visual Arts	-12.5*** (2.9)	15.6*** (4.9)	9.9*** (3.5)	.88 (1.6)
Support	14.5*** (5.2)	-14.1* (8.8)	-2.1 (6.2)	3.0 (2.9)
Other	-5.3** (3.1)	.86 (5.3)	8.8*** (3.8)	3.2** (1.8)
<b>Constant</b>	62.2 (5.1)	23.9 (8.7)	-9.6 (6.1)	10.4 (2.9)
<b>R-Squared</b>	.22	.16	.15	.11
<b>Observations</b>	1,008	1,008	1,008	1,008
*** p < .05    ** p < .10    * p < .20 Note: Standard errors are in parentheses				

### Works Cited and Data Sources

Blackwood, A (2016). Which Nonprofit Sectors were the Biggest Winners and Losers in 2014? *Urban Institute*. Retrieved from: <http://www.urban.org/urban-wire/which-nonprofit-sectors-were-biggest-winners-and-losers-2014>

Boston Creates (2015). Boston Creates A Cultural Plan.” Retrieved from: <http://www.bostoncreates.org/>

Bridgespan Group (March 2016). How to Research a Nonprofit’s Financial Strength—Deep-Dive Approach. Retrieved from: <http://www.bridgespan.org/Philanthropy-Advice/Researching-Nonprofits/Due-Diligence-Tool/In-Depth-Research-Nonprofit-Financial-Strength.aspx#.VucqgpMrLEY>

City of Boston (2014). PILOT Program (Payment in Lieu of Tax). Retrieved from: [www.cityofboston.gov/assessing/PILOTProgram.asp](http://www.cityofboston.gov/assessing/PILOTProgram.asp)

DataArts (2007 - 2015), Data Profiles of Arts and Cultural Organizations: Massachusetts)

Eden, R and Lyon D (January 1986). Indirect Costs: A Guide for Foundations and Nonprofit Organizations,” *Rand Corporation*.

Fried, H (2010). Ratio Analysis Overview,” *New York University Stern School of Business*. Retrieved from: <http://pages.stern.nyu.edu/~hfried/download/Ratios.pdf>

Lawrence, S and Mukai R. (2014), Arts Funding Snapshot: GIA’s Annual Research on Support for Arts and Culture. *GLAReader*, Vol. 25, No. 3. Retrieved from: [http://foundationcenter.org/gainknowledge/research/pdf/artsfunding\\_2014.pdf](http://foundationcenter.org/gainknowledge/research/pdf/artsfunding_2014.pdf)

Greater Philadelphia Cultural Alliance (2015), Culture Across Communities: An Eleven City Snapshot

Greenlee, J. S. and Trussel, J. M. (2000), Predicting the Financial Vulnerability of Charitable Organizations. *Nonprofit Management and Leadership*, 11: 199–210.

Hansmann, H. Nonprofit Enterprise in the Performing Arts. *The Bell Journal of Economics* 12.2 1981: 341–361.

Human Services Council of New York (2016). New York Nonprofits in the Aftermath of FECS: A Call to Action.

Keating, E and Pradhan, G. Passion & Purpose Revisited Massachusetts Nonprofits and the Last Decade’s Financial Roller Coaster, *the Boston Foundation*.

Keating, E and Frumkin, P (2001). How to Assess Nonprofit Financial Performance. *National Association of State Arts Agencies*.

Keating, T (2010). The Yale Endowment Model of Investing is Not Dead. *RLABiz*. Retrieved from: <http://www.riabiz.com/a/776012/the-yale-endowment-model-of-investing-is-not-dead>

Koo, J and Cabral Curtis E (2016). How Boston and Other American Cities Support and Sustain the Arts: Funding for Cultural Nonprofits in Boston and 10 Other Metropolitan Centers,” *TDC*.

Leigh, N and Blakely, E (1989). *Planning Local Economic Development: Theory and Practice*. Newbury Park, CA: Sage Publications.

McCambridge, R (2015). A County in Which Half the Economy is Nonprofit-Driven. *Nonprofit Quarterly*. Retrieved from: <https://nonprofitquarterly.org/2015/07/10/a-county-in-which-half-the-economy-is-nonprofit-driven/>

McCawley, P (2009). Methods for Conducting an Educational Needs Assessment: Guidelines for Cooperative Extension System Professionals, *the University of Idaho*. Retrieved from: <http://www.cals.uidaho.edu/edcomm/pdf/BUL/BUL0870.pdf>

- Metropolitan Area Planning Council (2010). Massachusetts Regional Homeland Security Advisory Councils. Retrieved from:  
<http://www.mapc.org/sites/default/files/Massachusetts%20Homeland%20Security%20Regions%200Brochure%20FINAL.pdf>
- Miller, C (2003). Hidden in Plane Sight: Understanding Nonprofit Capital Structure, *the Nonprofit Quarterly*.
- Miller, C (2008). Truth or Consequences: The Implications of Financial Decisions, *the Nonprofit Quarterly*.
- Nonprofit Finance Fund (2015). Systems Replacement Plan. Retrieved from:  
<http://www.nonprofitfinancefund.org/nonprofit-consulting/systems-replacement-plan>
- Nonprofit Finance Fund (2014). 2014 State of the Nonprofit Sector Survey Arts & Culture, *Arts Feature*.
- Nonprofit Finance Fund (2010). The Business Roots of Capacity and Mission at Nonprofits” *Capital Structure Counts*.
- Powell, W, and Steinberg R. (2006). *The Nonprofit Sector: A Research Handbook*. New Haven: Yale University Press.
- Princeton University Library. (2007). Working with Dummy Variables. Retrieved from:  
[http://dss.princeton.edu/online\\_help/analysis/dummy\\_variables.htm](http://dss.princeton.edu/online_help/analysis/dummy_variables.htm)
- Renz, L., (Summer, 2003). An Overview of Revenue Streams for Nonprofit Arts Organizations. *GLA Reader*, Vol. 14, No. 2.
- Rodney, C., (Spring, 2011). Why do Balance Sheets Matter? Grantmakers in the Arts *Reader*, Vol. 22, No. 1
- Rosett, R (1991). *Art Museums in the United States: A Financial Portrait*, Chapter 6: The Economics of Art Museums. Chicago: University of Chicago Press.
- Scheff, J and Kotler P (1996). How the Arts can Prosper through Strategic Collaborations, *Harvard Business Review*.
- Seltman H J (2010). *Experimental Design and Analysis*. Carnegie Mellon University, Pittsburgh PA
- Skrivanek S (2009). The Use of Dummy Variables in Regression Analysis. *MoreStream.com*. Retrieved from: <https://www.moresteam.com/whitepapers/download/dummy-variables.pdf>
- Sutton, B (2015). Arts Nonprofits Pool Their Know-How to Tackle Non-Artsy Problems. *Hyperallergic*.
- Throsby, D. (1994). The production and consumption of the arts: A view of cultural economics. *Journal of Economic Literature*, 32, 1, 1.

U.S. Department of Health and Human Services (2015). How Do We Interpret Our Financial Statements? Retrieved from: <http://eclkc.ohs.acf.hhs.gov/hslc/tta-system/operations/mang-sys/fiscal-mang/Howdoweinterpr.htm>