

# Tools for Predicting Municipal Bankruptcy: Indicators of Long-Run Governmental Financial Condition

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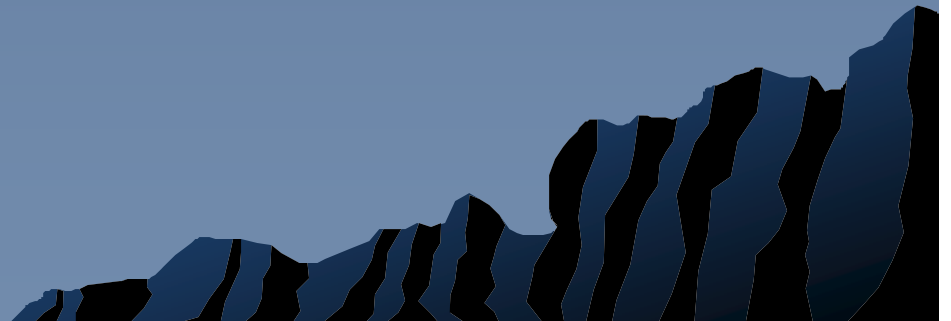
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# Long Run

- ◆ Sufficient time to permit managers to adjust all resources: capital & labor
- ◆ A government must maintain assets in real terms or it will be unable to continue providing services at given quantity & quality



# Long-Run Financial Condition

- ◆ Assessment requires
  - entity-wide presentation
  - economic resources measurement focus
  - full accrual basis of accounting
- ◆ Unavailable before GASB Statement 34
  - Still problems, as we will see

# Definition

- ◆ Two dimensions of long run financial condition
  - Financial *position* (net assets) combined with
  - Financial *performance* (change in net assets)
- ◆ Compute with data from entity-wide statements
  - Excluding discretely presented component units

# Measurement Issues

- ◆ Asset valuation
  - Two methods permitted
  - Capital assets generally are not sold to liquidate debt in case of default
- ◆ Pension liabilities
  - Not on balance sheet
  - Pension obligation bonds excepted


# Partial Solutions

- ◆ Assets: subtract capital assets from total & net assets
  - Issue is how much will taxes have to increase to meet current obligations
- ◆ Liabilities: subtract pension obligation bonds
  - Lowers visible liabilities but liability is still there
  - Indicator won't change when a hard liability is substituted for a soft one

# Current Indicators

- ◆ 69 reported in the literature
  - ICMA & Ken Brown's pre-GASB 34
  - Plus post-GASB 34
- ◆ Only 5 are used by multiple authors
- ◆ Only 2 of these deal with long run
  - Leverage (Liabilities / Assets)
  - Surplus or Deficit (Revenue / Expenses)

# Suggestions

- ◆ Position – Net financial assets per dollar of total financial assets
    - Eliminating capital assets may cause ratio to become negative
  - ◆ Performance – Change in net assets per dollar of total assets
    - Retain capital assets because over time both asset valuation methods should yield similar results
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# Performance

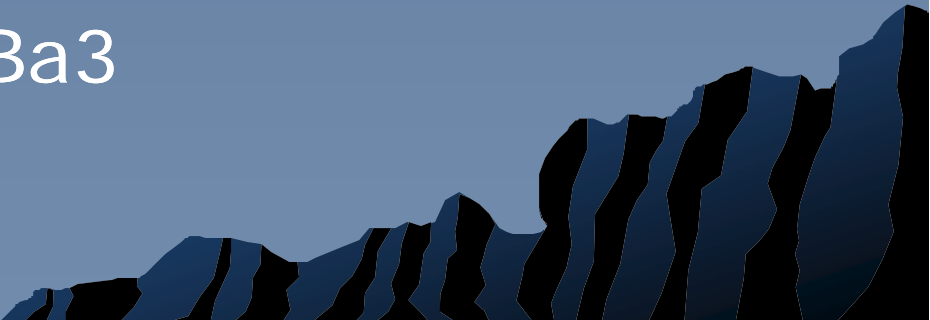
- ◆ Well-known as *Return on Assets (ROA)*
- ◆ Must exceed 2.5% (long run rate of inflation for government capital outlays)
  - Otherwise, a government cannot maintain its assets at replacement cost with the current revenue stream

# Application

## ◆ Phoenix

- Population growing
- Total expenses = \$2.9 bn
- S&P credit rating: AAA

## ◆ Detroit

- Population shrinking
  - Total expenses = \$3.1 bn
  - S&P credit rating: Ba3
- 

# Averages 2006 to 2010


	Phoenix	Detroit
Net Asset Ratio	0.50	0.11
<b>Net Financial Asset Ratio</b>	-0.50	-1.26
<b>Return on Assets</b>	3.3%	-1.6%
Real Per Capita Return on Assets	-0.8%	-1.9%

Larger numbers are more desirable.  
Negative numbers closer to zero are larger.

# Comparison of Position

- ◆ Phoenix's
  - Total assets are double its liabilities
  - Financial assets are 67% of its liabilities
- ◆ Detroit's
  - Total assets approximately equal its liabilities
  - Financial assets are 44% of its liabilities
- ◆ Financial Asset Ratio is a more stringent test

# Comparison of Performance

- ◆ 5-year average ROA
    - Phoenix = is **+3.3%**
    - Detroit = **-1.6%**
    - Spread is **4.9** points in Phoenix's favor.
  - ◆ Real capital per inhabitant
    - Decreasing by **0.8%/year** in Phoenix
    - Decreasing by **1.9%/year** in Detroit
    - Spread is only **1.1** points in Phoenix's favor.
  - ◆ More similar than expected but plausible
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# Plausible

- ◆ More similarity than expected but plausible because ....
- ◆ In 2010 Brookings ranked both Phoenix & Detroit metro areas among the 20 weakest metro economies

# Specific Conclusions

- ◆ Both cities are caught in the throes of anti-tax sentiment prevalent in the country at the time.
- ◆ Less public capital accumulation per person is an unavoidable consequence, whether a city is growing or shrinking

# General Conclusions

- ◆ Financial *position indicators* are problematic
  - Net Financial Asset Ratio is a stringent test
- ◆ Financial *performance indicators* are less so
  - ROA can be interpreted on an absolute scale – meaning that it can be compared to an objective benchmark like the inflation rate & is not dependent upon the performance of peers.
- ◆ Application of these indicators to two apparently different cities give confidence in the model



# Also in Paper

- ◆ List of all indicators in the literature since GASB 34 + ICMA & Brown
- ◆ Discussion of issues involved in using population as the denominator of financial indicators

The End

