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Business School

Centre for Applied Economic Research

Money and the Measurement of Total Factor Productivity

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EMG Workshop

5 December 2014

Overview

Examine the holding of cash balances by firms,
representing underutilized resources

Explore implications for the measurement of productivity.

Application to the US and other countries

Why hold cash balances?

Motivations for holding such liquid assets, rather than e.g. investment assets, include:

The need to cover immediate commitments (such as payments to suppliers, and the payment of dividends).

Unexpected contingencies.

Investment purchases

These assets represent underutilised resources. If a firm can effectively keep such low-yield balances to a minimum, it can invest in higher return assets, such as physical capital that can produce more output.

Cash balances well-known to industry as underutilised resources

They can be large, and they can vary:

per cent of companies lifted their interim dividends, while cash

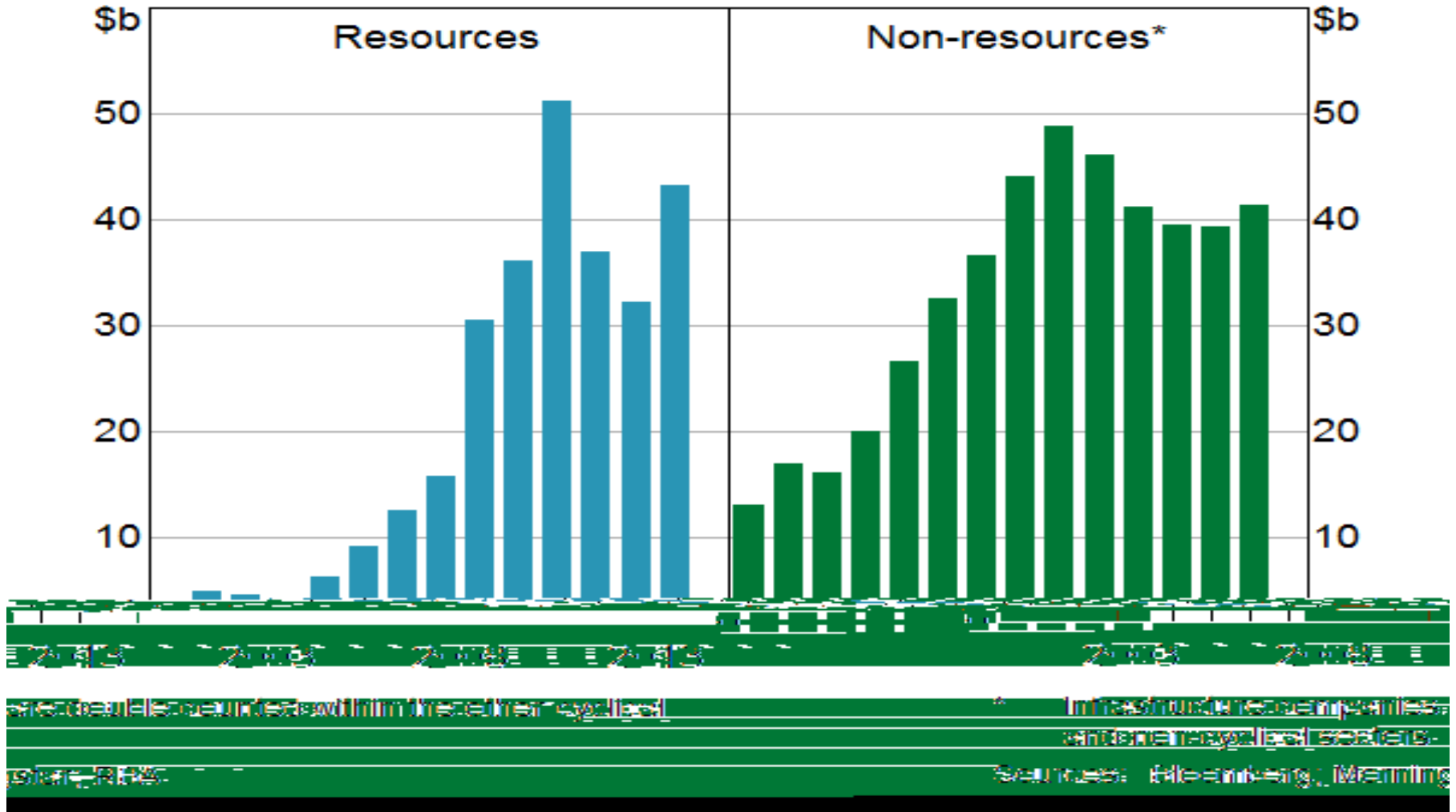
ABC News Online (3 March 2014)

"Companies are sitting on significant cash reserves and are well placed to invest, employ and embrace future opportunities such as mergers and acquisitions. Indeed investors will want to know how Aussie companies plan to utilise cash reserves to lift future returns."

Craig James, Chief Economist CommSec, ABC News Online (3 March 2014).

Cash Holdings by Sector

Listed companies, year-end figures



Address to CEDA Luncheon, Adelaide - 3 September 2014

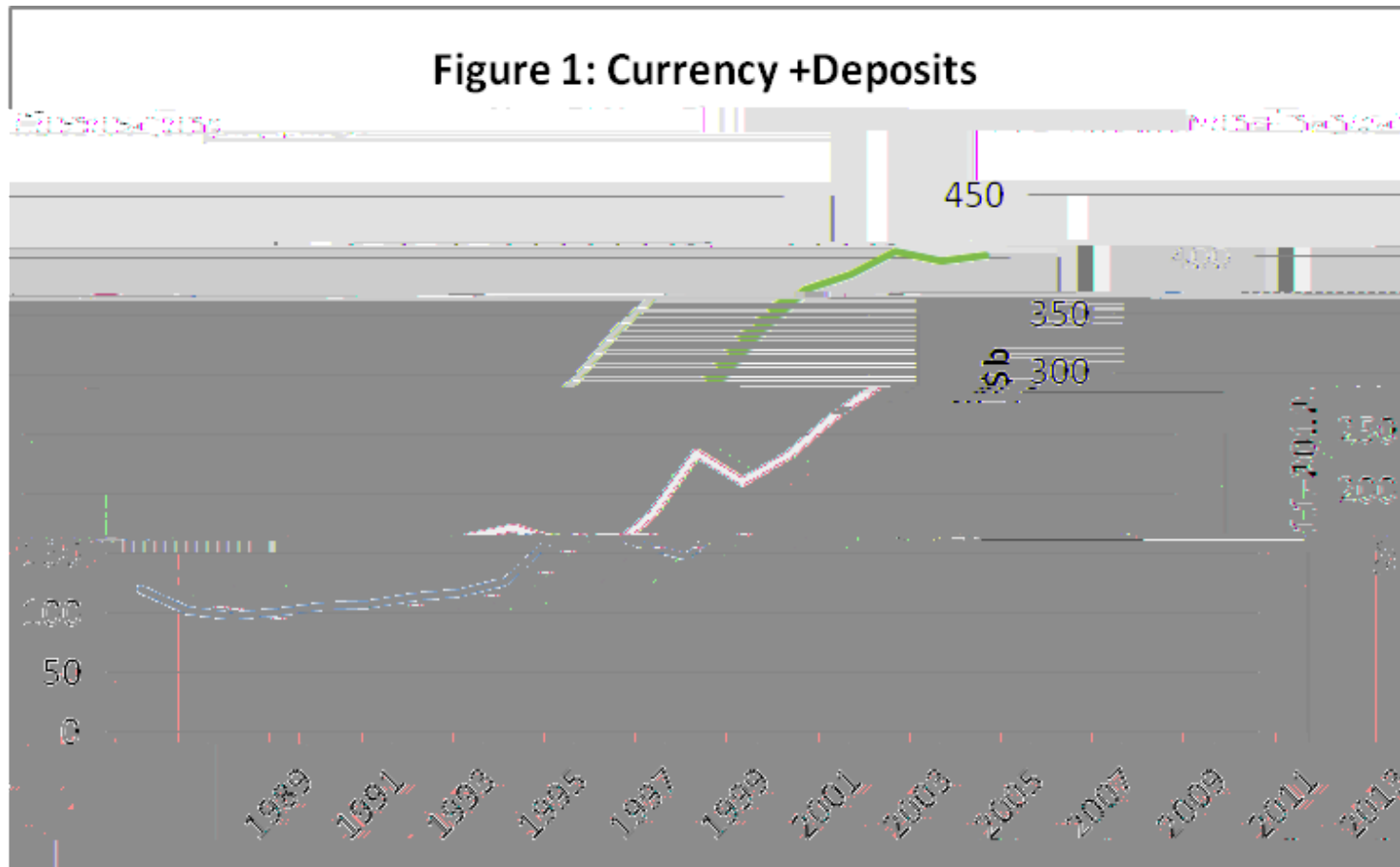
<http://www.rba.gov.au/speeches/2014/sp-gov-030914.html>

Literature

Money in the production function?

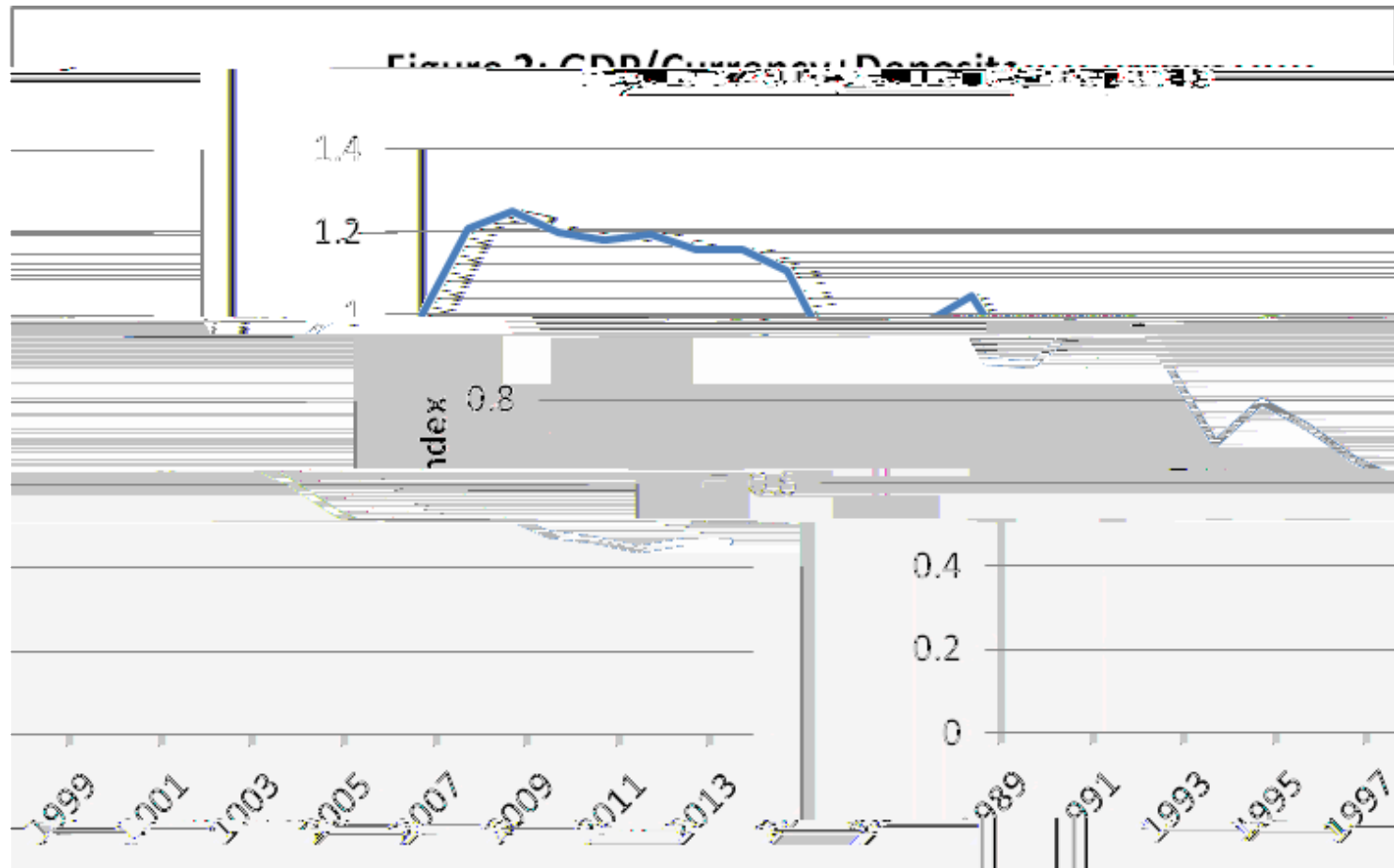
Johnson (1969), Stein (1970), Friedman (1969), Bailey (1971)

Example: Cash Balances and Productivity



Data sources: Australian System of National Accounts, 2012-13, Cat. No. 5204.0 Table 20 and Cat. No. 6401 - Consumer Price Index, All Groups CPI.

Example: Cash Balances and Productivity



Additional data source: Australian System of National Accounts, 2012-13, Cat. No. 5204.0 Table 1.

Ratio falls more than 50% between 1989-90 and 2012-13

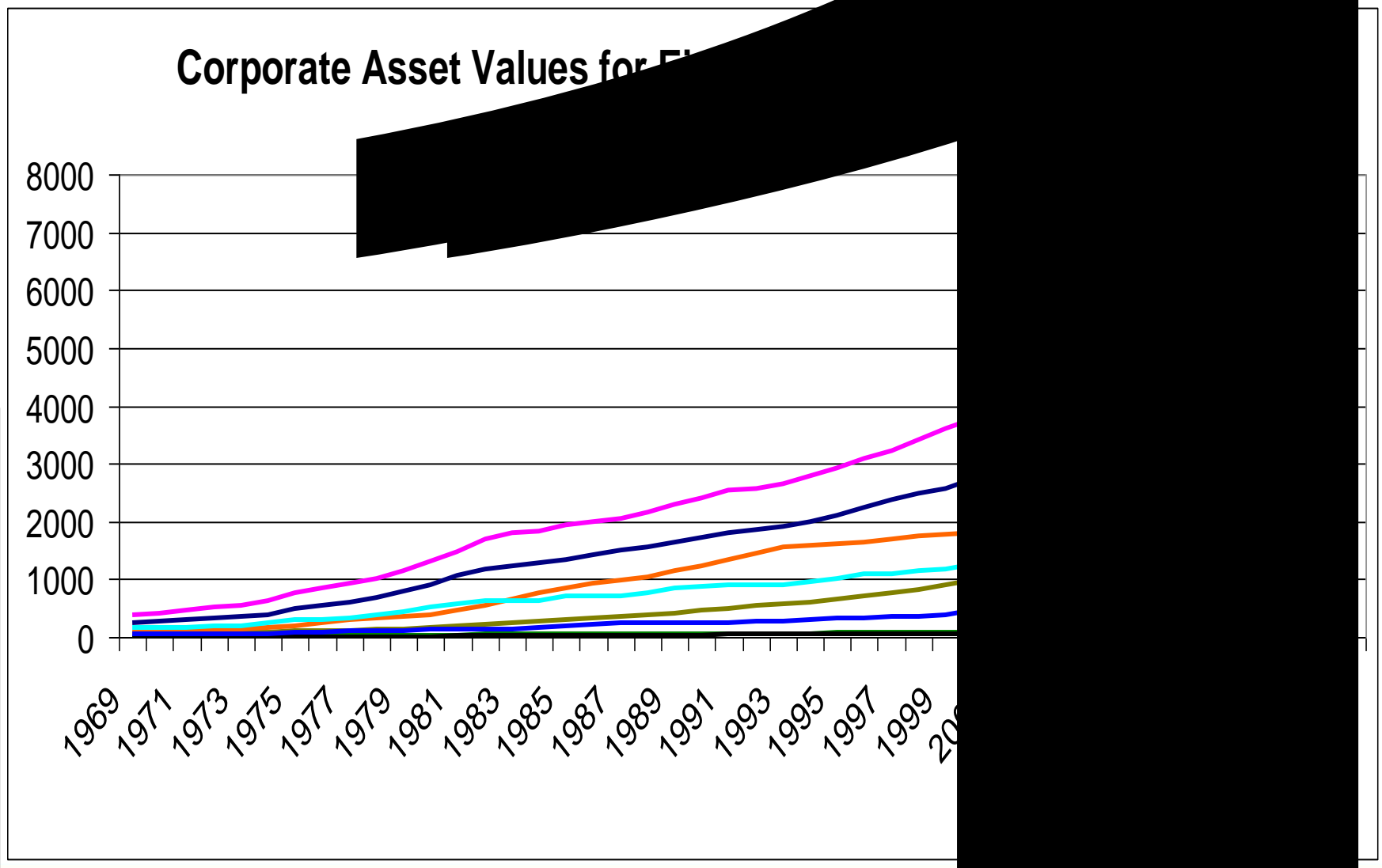
Conceptual Issues and Data

Another issue to consider is the manner in which to aggregate over different classes of assets with varying degrees of liquidity.

For the US, use the BEA Integrated Macroeconomic Accounts:

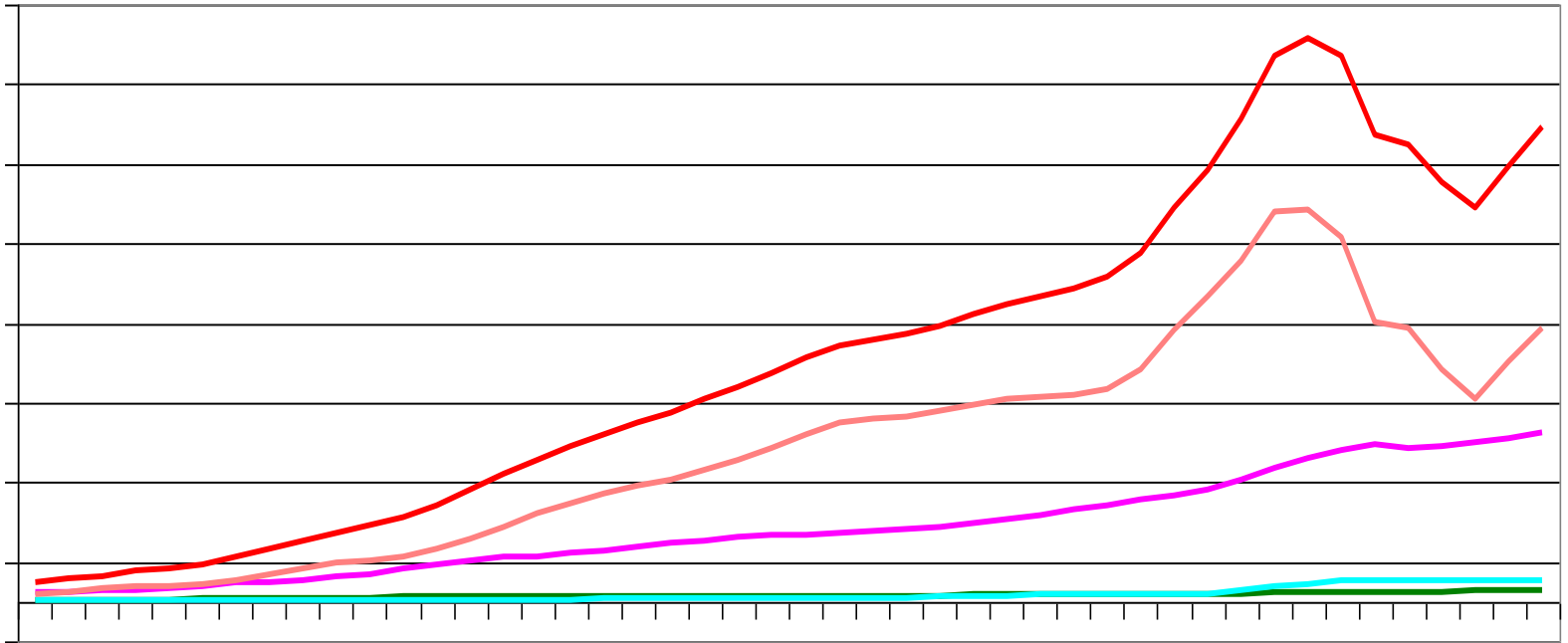
They are part of an interagency effort to further harmonize the BEA National Income and Product Accounts (NIPAs) and the Federal Reserve Board Financial Accounts of the United

Asset Values



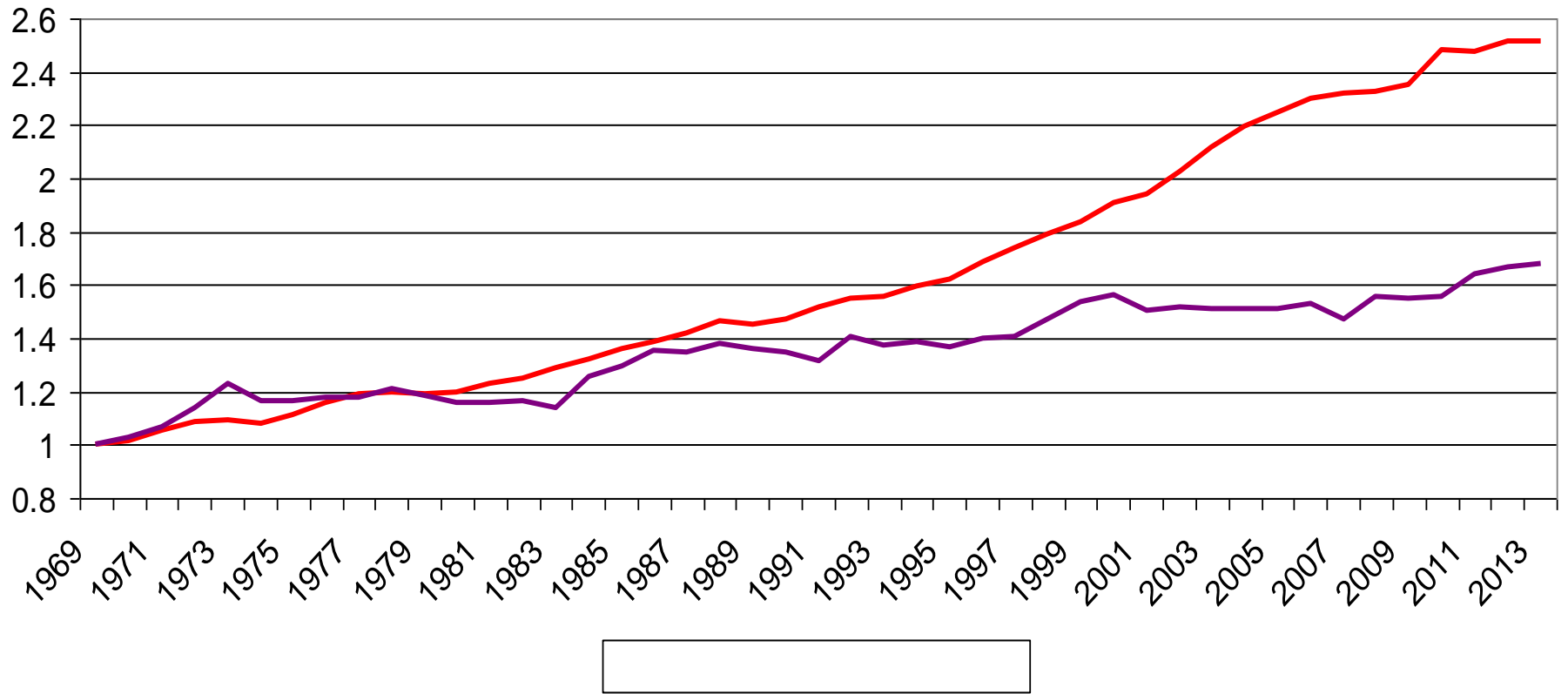
Asset Values

Asset Values

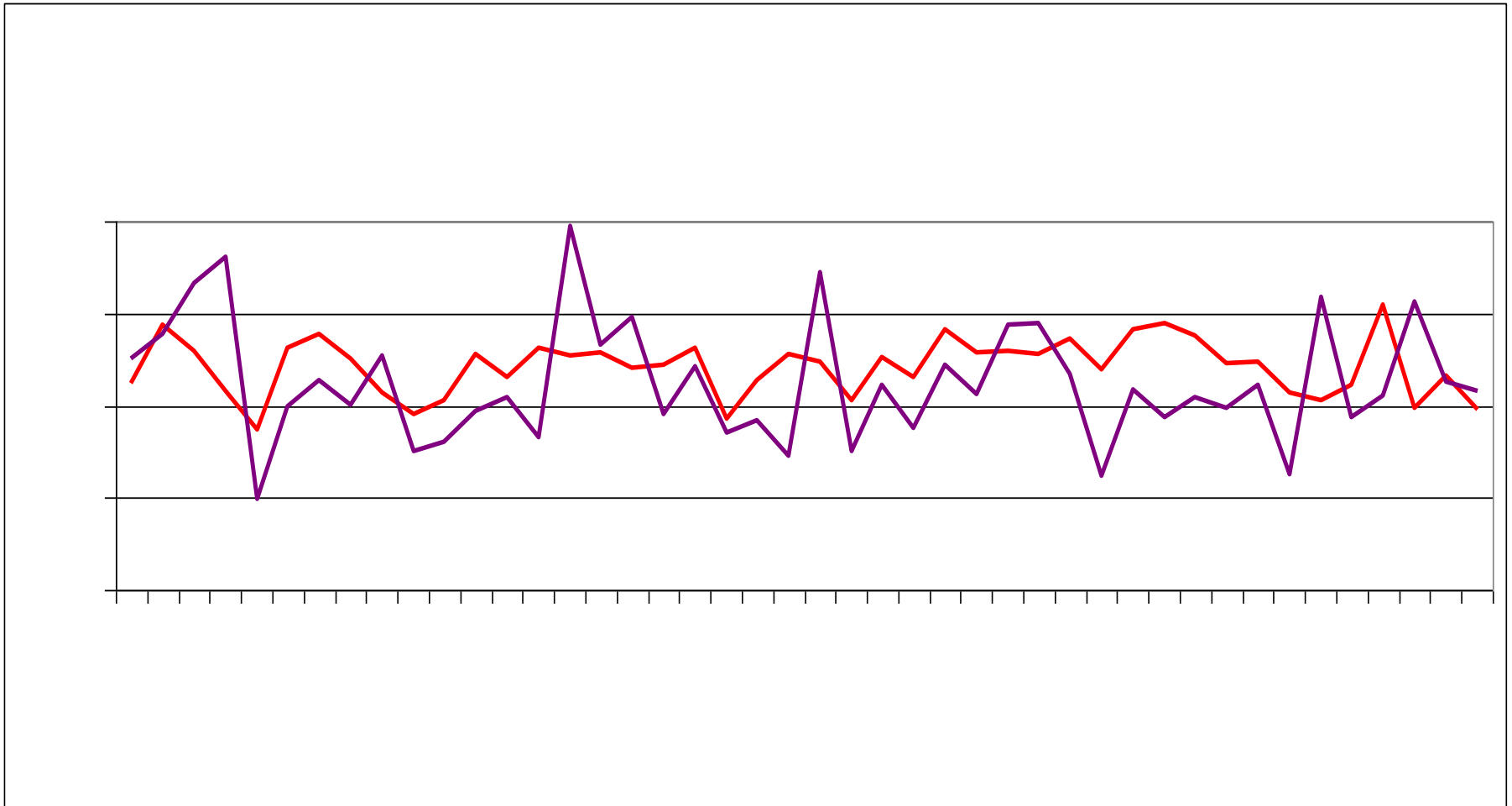


Productivity

Labour Productivity, Corporate and Noncorporate Sectors: Levels



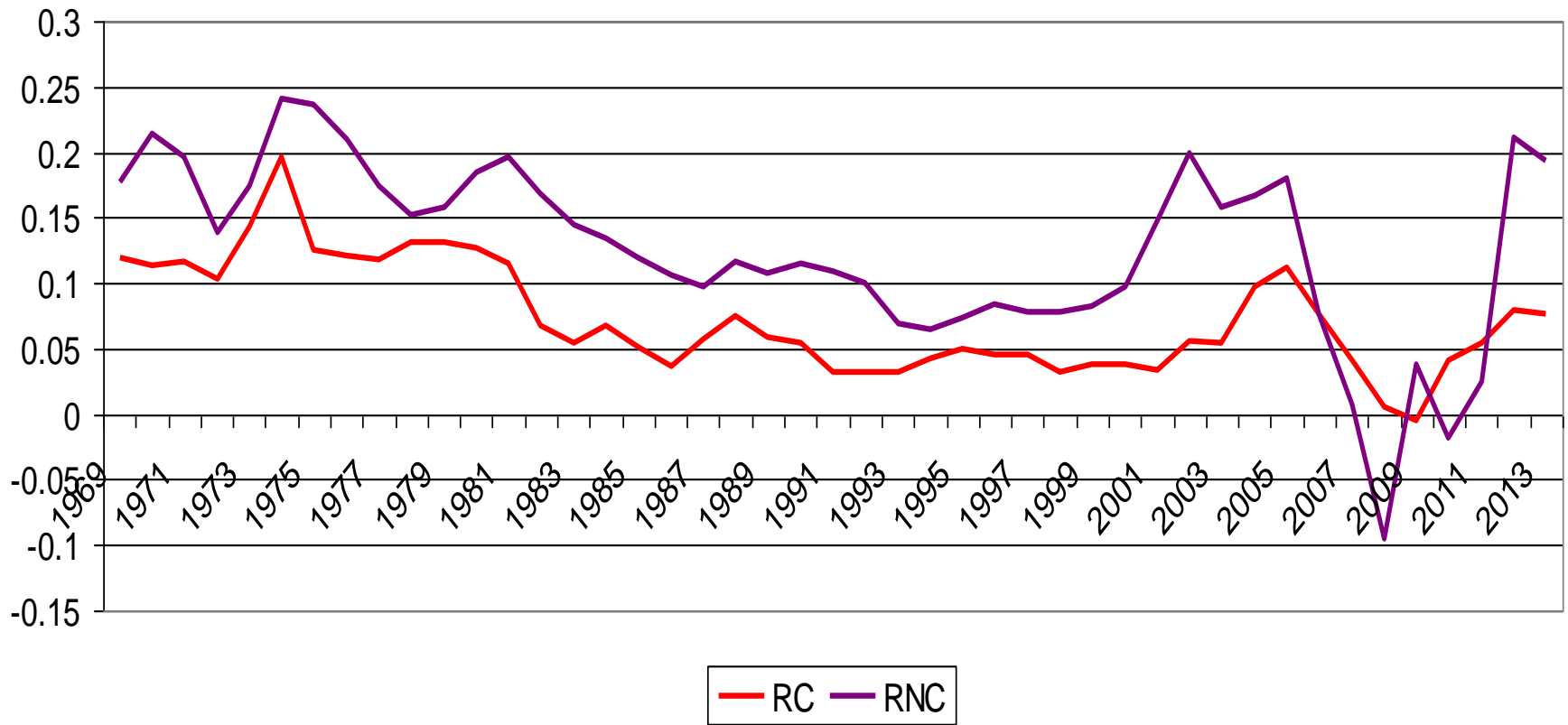
Productivity



Note the tremendous volatility of the noncorporate productivity growth rates. This is almost certainly due to the inclusion of the farm sector.

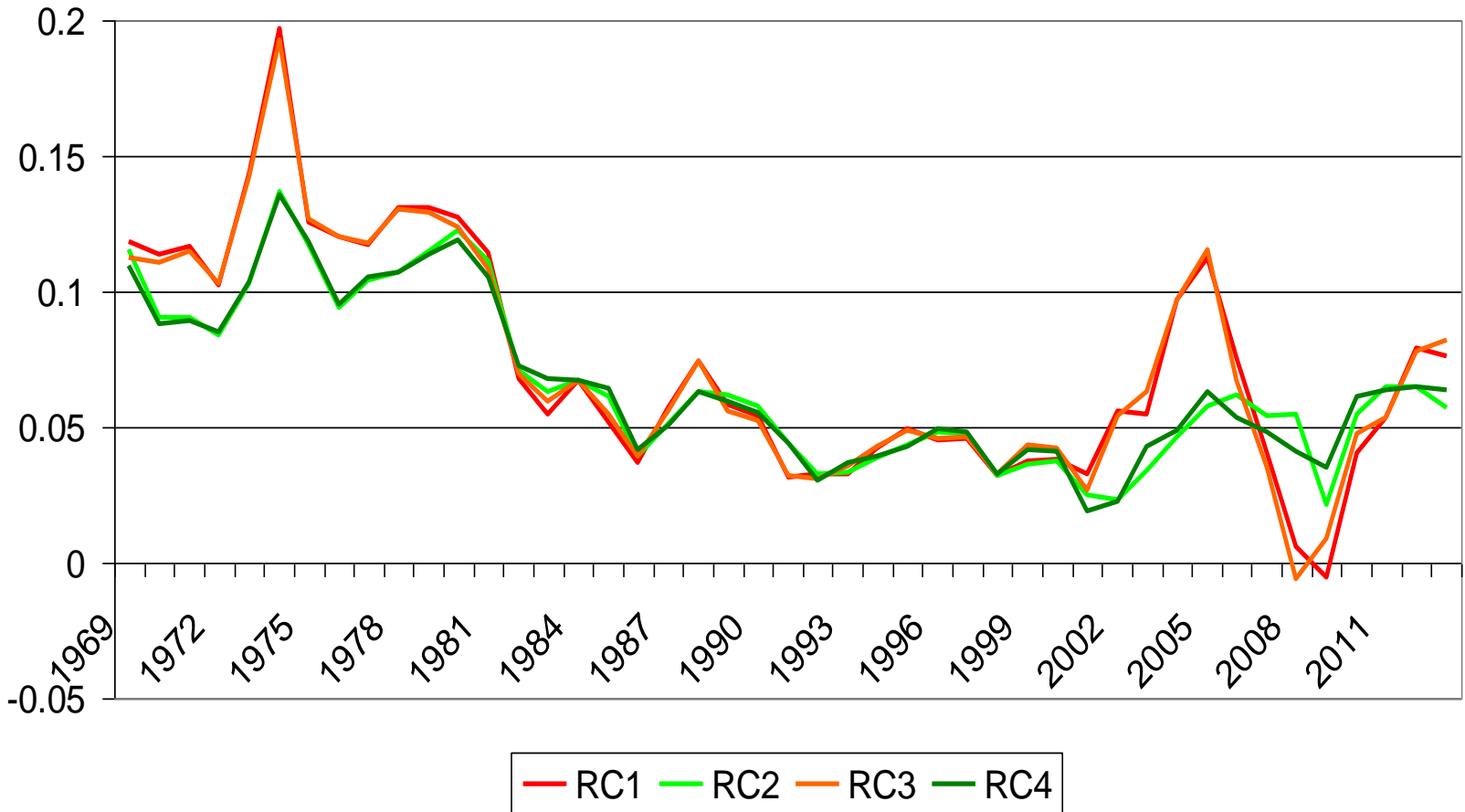
Rates of Return

Before Tax Balancing Rates of Return in the Corporate and Noncorporate Sectors; Ex Post Capital Gains Included



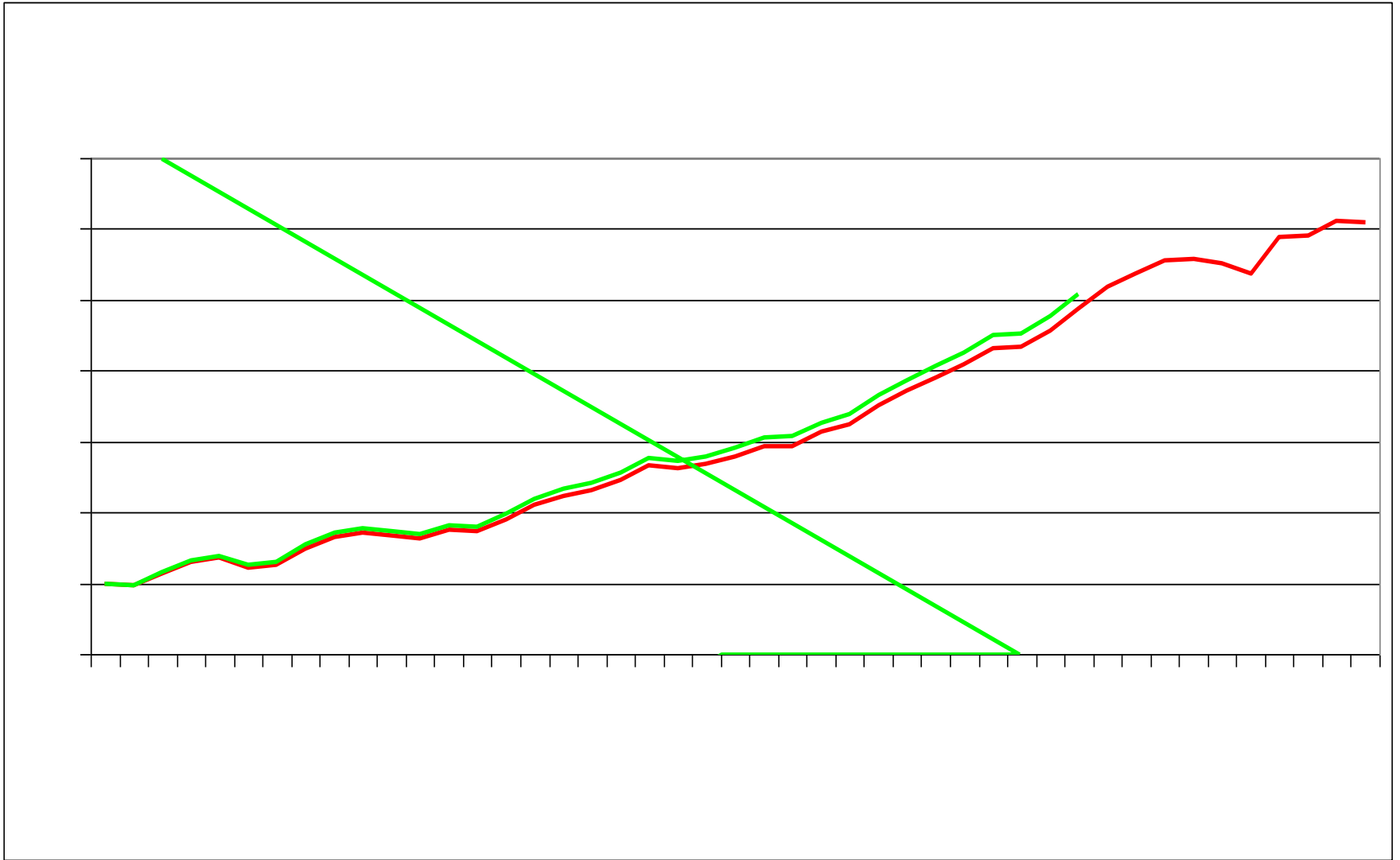
Rates of Return

Corporate Sector Balancing Rates of Return: Models 1-4



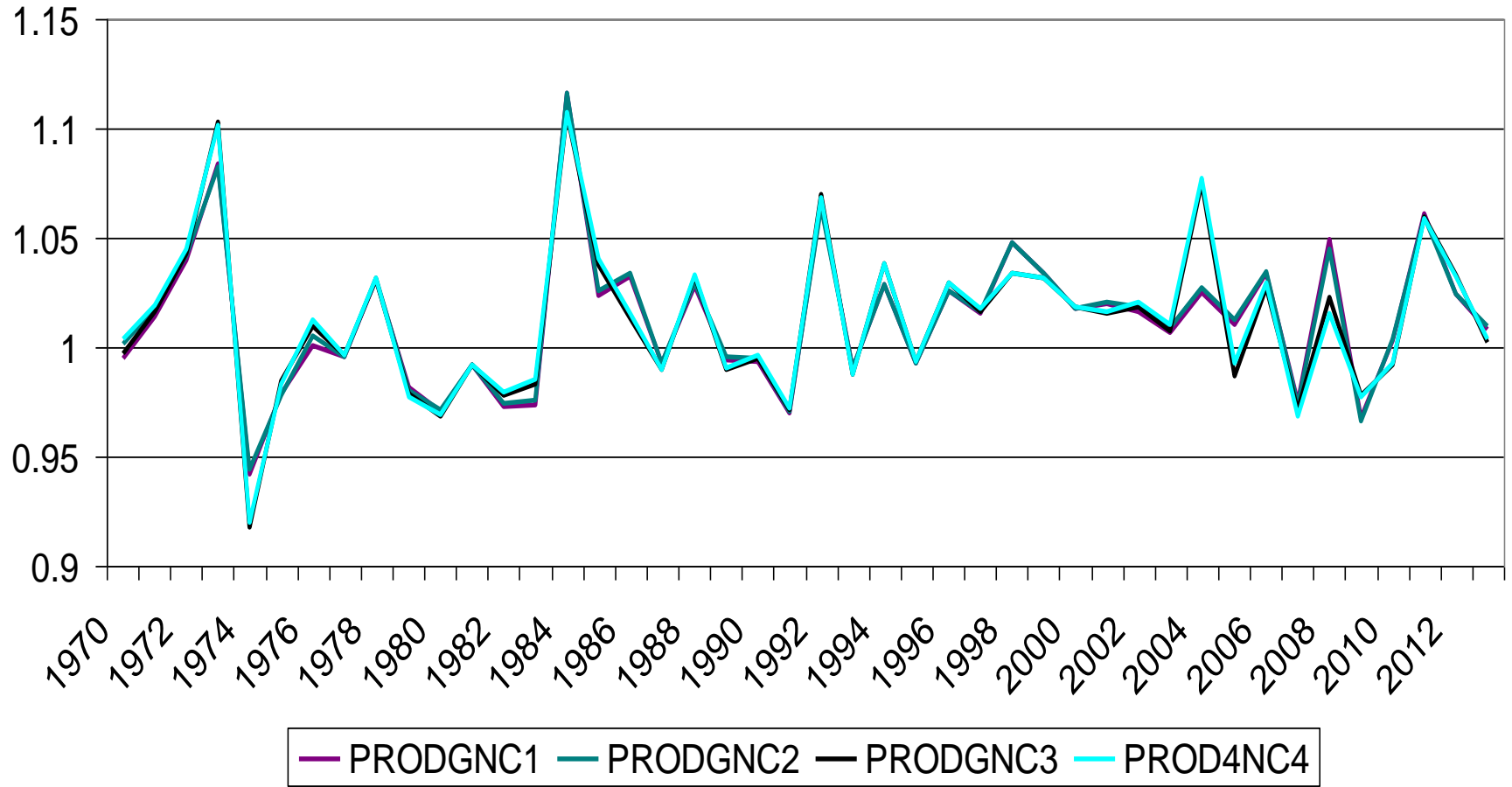
Rates of Return

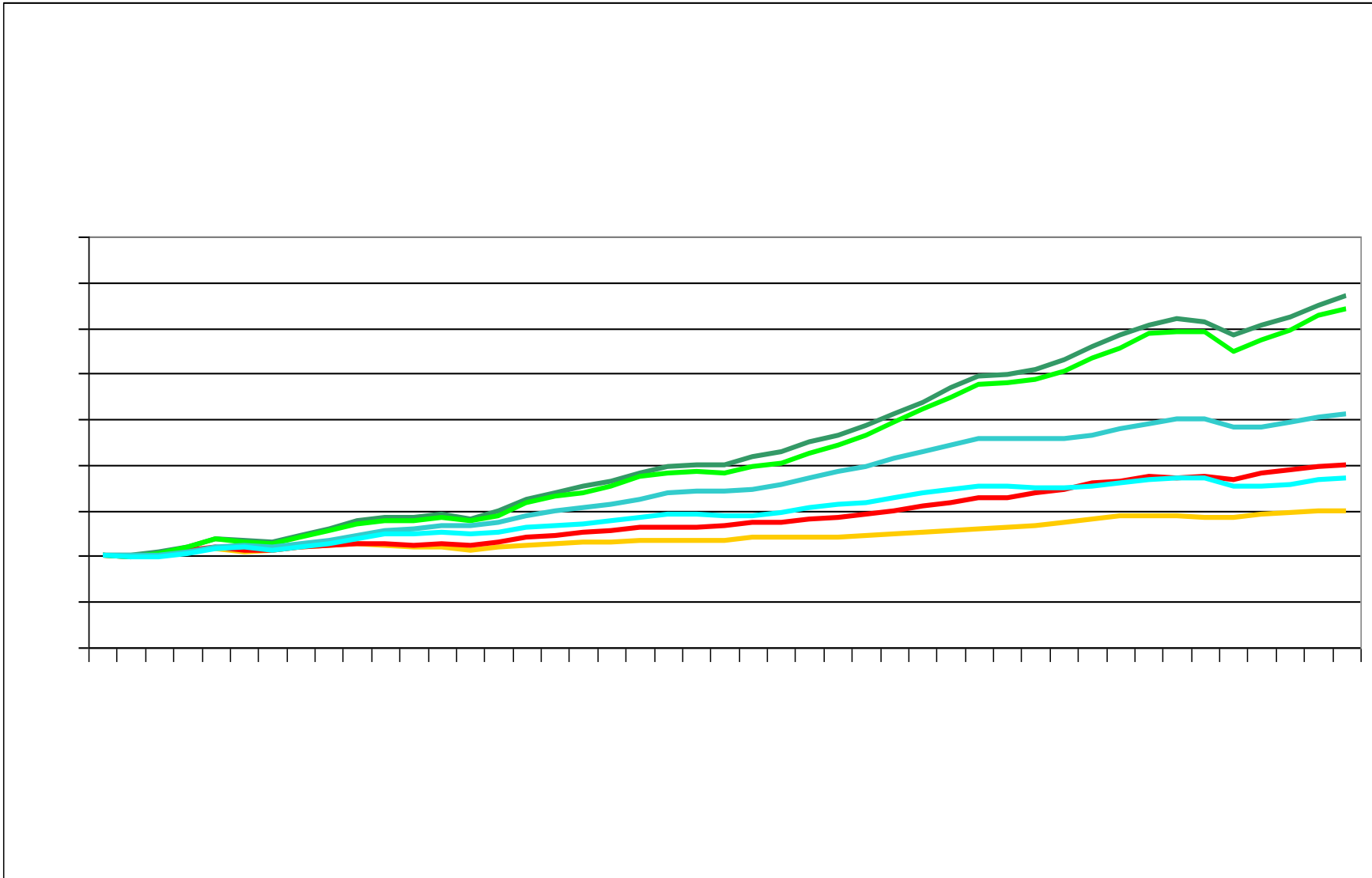
TFP

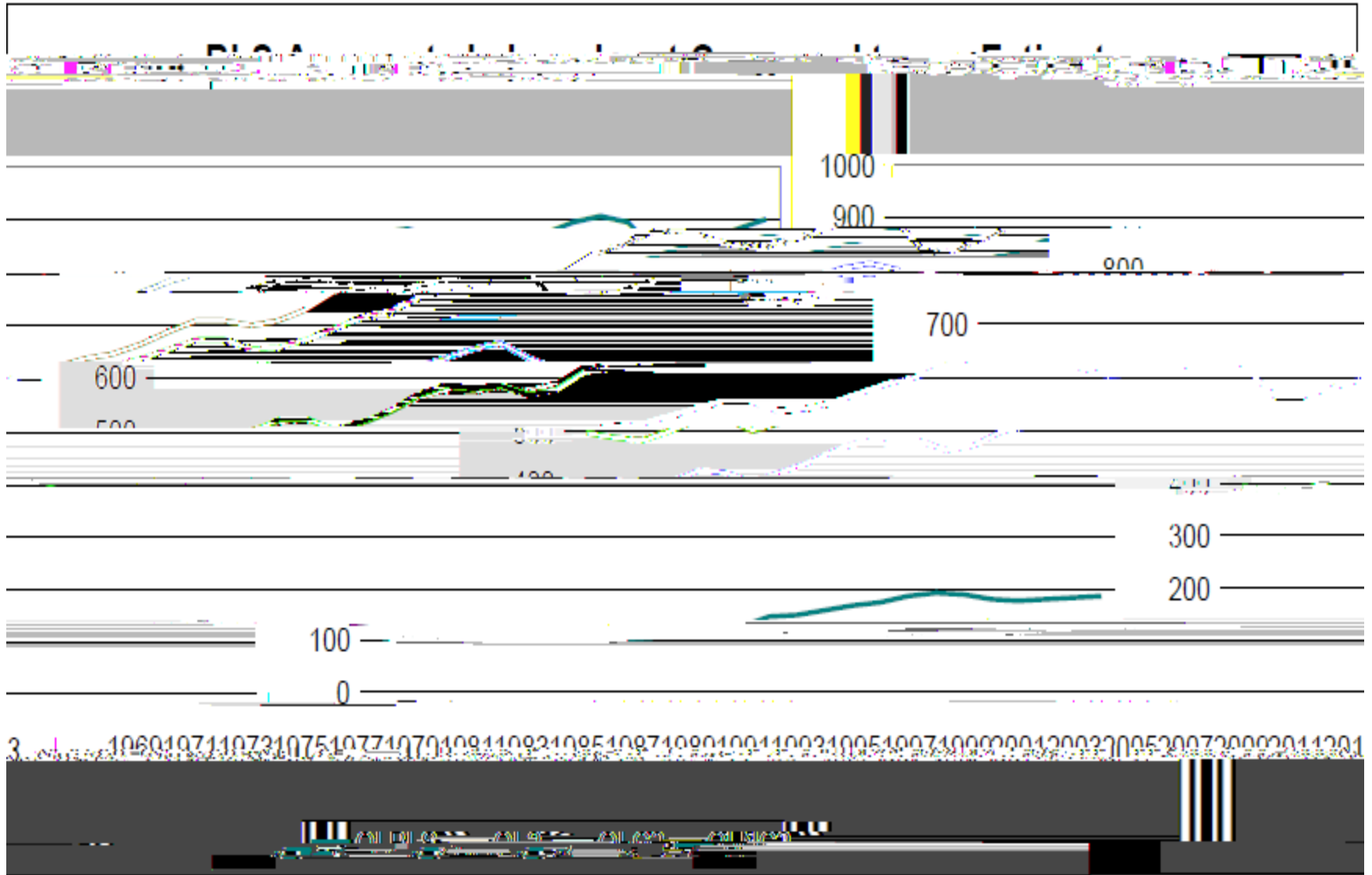


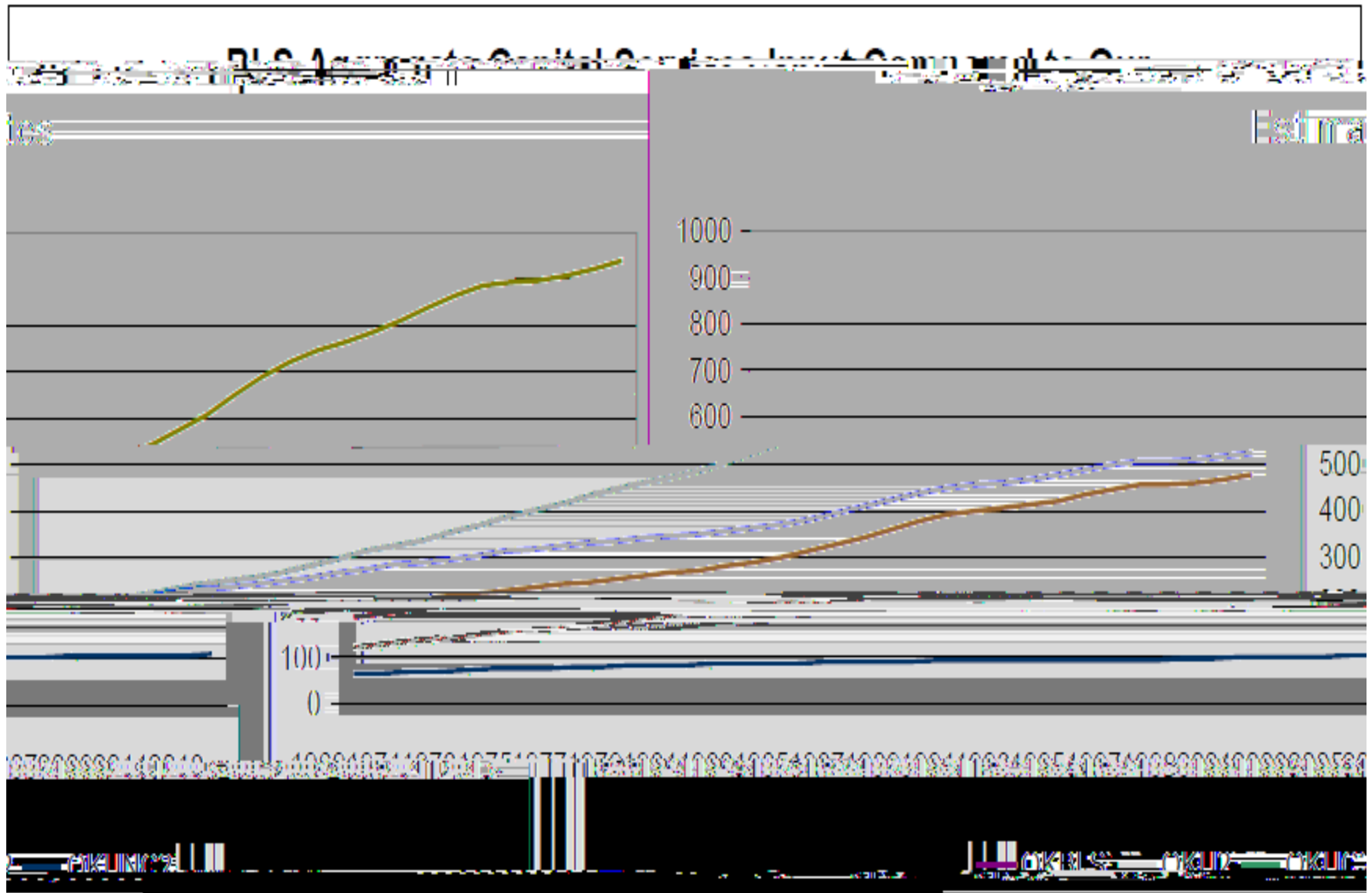
TFP

Noncorporate TFP Growth Rates: Models 1-4









Conclusion

Adding monetary balances to the list of assets (and treating these holdings as inventory items) does not change the productivity picture to any great extent.

However, the missing asset problem with KLEMS is huge: inventories, money holdings and land are all missing from the KLEMS data.

Omitting these assets greatly changes rates of return and rates of TFP growth.

The BLS and BEA estimates for the value of land are way too low. This