IMF Statistics Department

Dylan G. Rassier: Fair Value Accounting and Measures of U.S. Corporate Profits for Financial Institutions

Comments from

Robert Dippelsman, IMF Statistics Department, August 2016

Overview

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  - Output/income/production data derived from financial reports include holding gains/losses on financial assets and liabilities
  - The paper shows some indicators of the potential size and behavior of these gains/losses for financial institutions, particularly in 2007-9.
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  - The paper shows some indicators of the potential size and behavior of these gains/losses for financial institutions, particularly in 2007-9.
  - The paper suggest that holding gains/losses are not fully removed in BEA's estimates.
- 2) **Should holding gains/losses be included in the production boundary?**

1) Fair Value Accounting

- "... an amount at which an asset could be exchanged between knowledgeable and willing parties in an arms length transaction"
- IASB and US GAAP
  - Balance sheet should show market and market-equivalent values in many cases
  - Profits include changes in values (realized or unrealized)
    - National accounting standards exclude these effects from production and income.
    - Adjustments to exclude them are made in the US National Income and Product Accounts.

U.S. Corporate Profits in the NIPAs

- Direct Measurement
  - Quarterly financial-based source data for quarterly estimates
  - Annual tax-based source data for annual estimates
  - Quarterly source data used to extrapolate and interpolate
  - Bureau of Economic Analysis adjusts source data to remove holding gains and losses

- Quarterly Source Data
  - Census Bureau Quarterly Financial Reports
  - Securities and Exchange Commission financial reports (NAICS 52229, 523, 52411, 52599)
  - Federal Deposit Insurance Commission call reports (NAICS 5221)
  - Insurance Service Office data

- Rassier 2012 in *Survey of Current Business*

> "… the pattern of corporate profits in the finance and insurance industries over the period raises the issue of whether mark-to-market gains and losses play a role in the pattern of the statistical discrepancy given the relatively high corporate profits in the finance and insurance industries leading up to the NBER peak and following the NBER trough and dramatically low corporate profits during the recession."

Published U.S. Domestic Corporate Profits

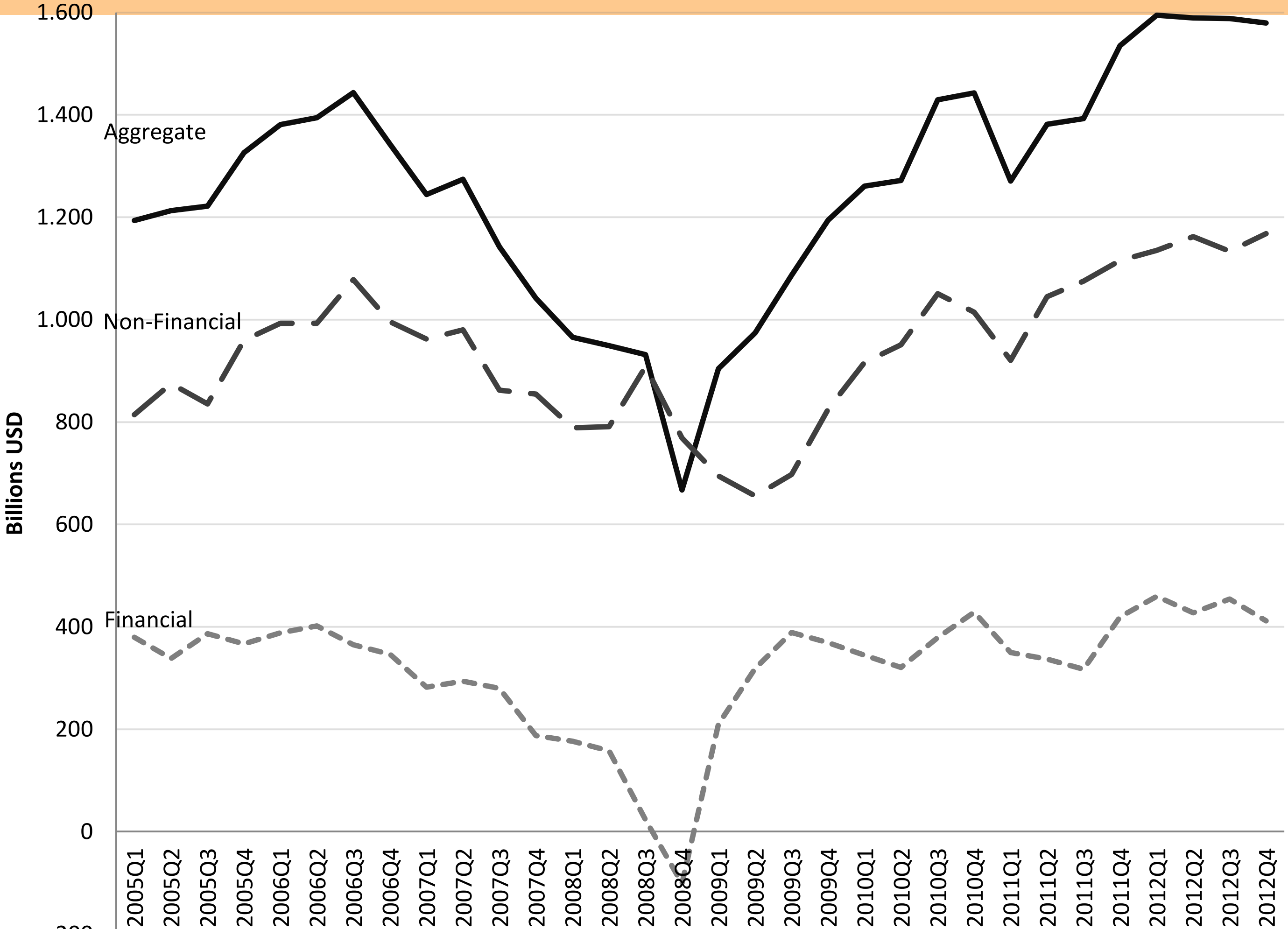
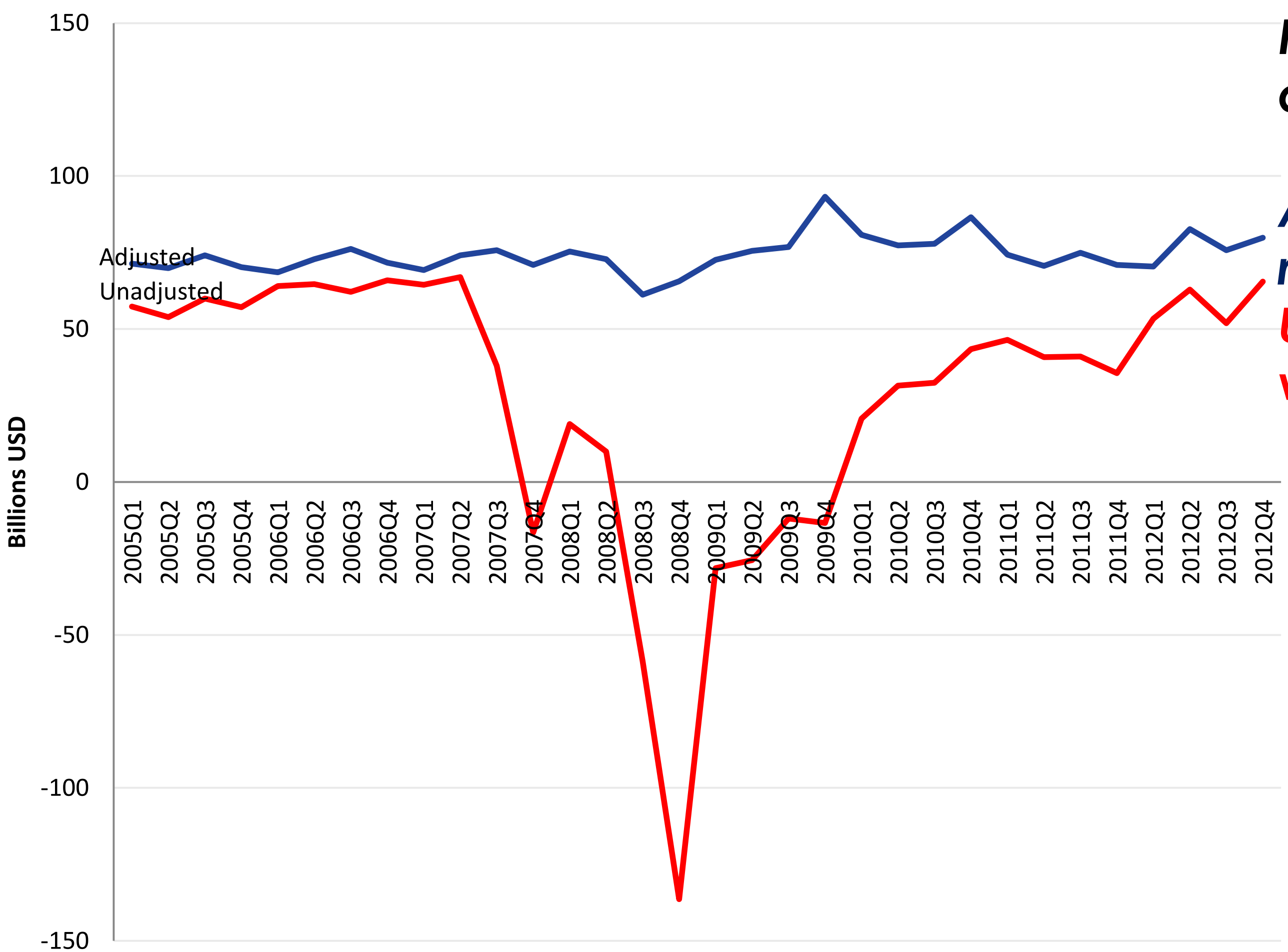


Figure 2

New work for this paper

- (a) Estimates of income before and after adjustments from quarterly financial report filings with:
  - Securities and Exchange Commission
  - Federal Deposit Insurance Commission
- (b) Correlations and estimation of corporate profits

a) Quarterly Source Data: GAAP-Based Net Income for Financial Institutions



Holding losses large during 2007-9.

Adjusted series is remarkably stable. Unadjusted series is volatile.

Figure 8

b) Correlation Coefficients

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Relative Aggregate Measures									
(1)	Consumption	1.00							
(2)	Investment	0.02	1.00						
(3)	Net Exports	0.62***	-0.48***	1.00					
(4)	Compensation	0.98***	0.03	0.55***	1.00				
(5)	Taxes less Subsidies	0.99***	0.07	0.55***	0.98***	1.00			
(6)	Corporate Profits	0.46***	0.59***	-0.15	0.49***	0.53***	1.00		
(7)	Other Gross Operating Surplus	0.96***	0.02	0.69***	0.92***	0.93***	0.33*	1.00	
(8)	Revaluations of Financial Assets	0.19	0.02	0.07	0.20	0.23	0.52***	0.06	1.00
Panel B: Relative Measures for Financial Corporations									
(1)	Consumption	1.00							
(2)	Investment	0.65***	1.00						
(3)	Net Exports	0.28	-0.23	1.00					
(4)	Compensation	0.16	0.13	0.53***	1.00				
(5)	Taxes less Subsidies	-0.33*	-0.55***	-0.04	-0.43**	1.00			
(6)	Corporate Profits	0.37**	0.06	0.48***	-0.09	0.42**	1.00		
(7)	Other Gross Operating Surplus	0.18	0.80***	-0.65***	-0.03	-0.50***	-0.31*	1.00	
(8)	Revaluations of Financial Assets	0.07	0.03	0.20	-0.04	0.42**	0.67***	-0.11	1.00
Panel C: Relative Measures for Non-Financial Corporations									
(1)	Consumption	1.00							
(2)	Investment	0.10	1.00						
(3)	Net Exports	0.60***	-0.45***	1.00					
(4)	Compensation	0.96***	0.12	0.45***	1.00				
(5)	Taxes less Subsidies	0.99***	0.20	0.49***	0.96***	1.00			
(6)	Corporate Profits	0.39**	0.76***	-0.29*	0.45***	0.50***	1.00		
(7)	Other Gross Operating Surplus	0.97***	0.15	0.64***	0.90***	0.95***	0.35**	1.00	
(8)	Revaluations of Financial Assets	-0.25	0.04	-0.16	-0.23	-0.24	0.11	-0.29*	1.00

Table 3

c) Estimation of Corporate Profits for Financial Corporations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Consumption		1.221***						1.256*	
		(0.004)						(0.667)	
Investment			0.253					-0.651	
			(0.691)					(1.029)	
Net Exports				5.638***				3.793*	
				(1.736)				(2.227)	
Compensation					-0.260				-0.329
					(0.631)				(0.779)
Taxes less Subsidies						5.784			-0.468
						(3.821)			(5.919)
Other Gross Operating Surplus							-0.724**		-0.751**
							(0.311)		(0.359)
Revaluations of Financial Assets	3.429***	3.309***	3.424***	3.066***	3.416***	3.085***	3.299***	3.076***	3.305***
	(1.010)	(0.809)	(1.020)	(0.699)	(1.063)	(0.986)	(0.920)	(0.625)	(0.916)
Intercept	0.203***	-0.392**	0.173**	0.174***	0.339	-0.011	0.243***	-0.352	0.433
	(0.012)	(0.191)	(0.083)	(0.016)	(0.331)	(0.143)	(0.019)	(0.232)	(0.594)
Adjusted R^2	0.455	0.557	0.457	0.581	0.458	0.476	0.512	0.640	0.517
Number of Observations	32	32	32	32	32	32	32	32	32

Table 6

Conclusions on Effect of Fair Value Accounting

- Patterns in the source data and the related statistical analyses suggest that published quarterly U.S. corporate profits statistics for financial institutions appear to reflect holding losses.

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- Patterns in the source data and the related statistical analyses suggest that published quarterly U.S. corporate profits statistics for financial institutions appear to reflect holding losses.

- During the recessionary period 2007Q4 to 2009Q2:
  - Published quarterly U.S. corporate profits experience a disproportionate decline relative to other components of GDP.
  - Adjustments required to remove Fair Value accounting losses for financial institutions are significant.
  - Published quarterly U.S. corporate profits statistics for financial institutions appear to reflect holding losses, which is also indicated by the related statistical analyses.

Conclusions on Effect of Fair Value Accounting

- Residual holding gains/losses included in existing methods, so
  - Recommends a direct survey

Issues for Discussion

- Applicability to other countries
  - Adoption of IAS/GAAP
  - Other countries – holding gains/losses remain?

Issues for Discussion

- New direct survey data would be desirable, but consider alternatives;
  - Can we identify what is the cause of error in existing sources, with a view to making changes in forms or methods?
  - Modelling solutions?

Issues for Discussion

- Can holding gains/losses be estimated by modelling?
  - Data on composition of stock of financial assets/liabilities in balance sheets
    - Instrument type/currency/maturity
    - Identify assets not valued at fair value, or only revalued annually
  - Compare model with survey data

Issues for Discussion

- Focus is on profits for income and GDP (BEA perspective) but …
- Holding gains and losses also arise for stock-flow reconciliation for flow of funds and balance sheets (Federal reserve Board perspective)
  - $\text{Stock}_{\text{beginning}}$ + Transactions + Holding gains/Losses + Other Flows = $\text{Stock}_{\text{end}}$

Issues for Discussion

- Other economic flows
  - Holding gains/losses in the *SNA*
  - Other economic flows – other
    - Write-offs when regarded as uncollectable (differ from provisions for losses); could have been significant in 2007-9.

- Effect of impaired instruments and differences in SNA valuation and timing for different instruments. Compare:
  - Holding a set of mortgages
  - Holding mortgage-backed securities
- Rassier adjustments in Figure 8 more than holding gains/losses; also include provisions for credit losses

2) Should holding gains/losses be included in the production boundary?

- Secondary objective of paper that holding gains/losses should be recognized as production/income.

2) Should holding gains/losses be included in the production boundary?

- Rassier's results from SEC returns for NAICS 523 (securities, commodity contracts, and other financial investments and related activities) show NEGATIVE values in **a**ll years for earnings after deducting holding gains/losses (Table 9)
  - Suggests that expected net (positive) holding gains are part of the business model

	2005	2006	2007	2008	2009	2010	2011	2012
Earnings before income tax	24.2	31.5	8.2	-37.2	29.4	23.1	7.7	29.7
Adjusted earnings before income tax	-3.1	-16.4	-11.0	-3.0	-11.1	-21.6	-23.9	-20.2

2) Should holding gains/losses be included in the production boundary?

- Paper points out that large % of financial services are used as intermediate consumption, which means GDP effect limited
  - but change in industry mix for value added;
  - some used by households for wealth management and non-market producers;
  - possibly important for countries that are exporters of financial services

2) Should holding gains/losses be included in the production boundary?

- The System gives variables to analyze effect without changing GDP
  - Income + changes in net worth