

# Next Steps in Internal Integration

Flexible Annual Revisions  
NIPA Feedback Loop  
Improved Value Added Reconciliation

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## Overview

- Earlier steps
  - Improved consistency across accounts
  - Improved benchmarks, extrapolation, and accuracy
- Next steps
  - Planning stage
    - Flexible annual revisions
  - Underway
    - NIPA feedback loop
    - Improved statistical method for reconciling estimates of value added

## Improved Consistency Across Accounts

- June 2004: Released the time-series of integrated annual input-output (I-O) and GDP-by-industry accounts, 1998-2002
- December 2004 and December 2005: Annual revisions to industry accounts synchronized with annual revisions to the NIPAs

## Reconciled Value Added Levels

- Introduced statistical method to estimate value added by industry for 1997
  - Benchmark I-O value added is weighted by:
    - Percent of intermediate inputs and gross output covered by the economic census
  - GDI-based value added is weighted by:
    - Size of adjustments to convert enterprise-based source data to an establishment basis
    - Proprietors' income share of value added
  - Combined result is quality-weighted value added, which is then scaled to NIPA GDP

## Improved Extrapolation

- Estimates incorporate the most timely and highest-quality source data.
- Value added is extrapolated with industry distributions of GDI from the NIPAs.
- Proportional scaling to GDP is unlikely to change the general picture of growth.
- Preliminary estimates are balanced within an I-O framework to establish consistency.

## Improved Accuracy

- Nominal, quantity, and price measures now reflect current-year information on the commodity mix of industries' outputs and inputs.
- Early evidence: Integration methodology presents a more accurate picture of real economic growth as defined by:
  - Direction of change
  - Relative ranking of industry growth
  - Industry growth relative to trend
  - Acceleration or deceleration in growth
  - Real value added across *all industries* tracks more closely with NIPA real GDP

## Next Steps

- Demand of integration: closer coordination
  - Flexible annual revisions
- Dividends of integration: more collaborations
  - NIPA feedback loop
  - New statistical method to further improve estimates of value added

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## Annual Industry Accounts (AIA) Use Table

		INDUSTRIES						Final Uses		Total Commodity Output
		Agric.	Constr.	Mfg.	Trans.	Trade	Serv.	PCE	PES	
COMMODITIES	Agriculture									
	Construction									
	Manufacturing									
	Transportation									
	Trade									
	Services									
	Value added									
	Total Industry Output									

## NIPA Feedback Loop

- NIPA feedback:
  - Inter-directorate investigations of differences between AIA and NIPA estimates
- Objectives:
  - Improve PCE and PES estimates
  - Strengthen staff capabilities

## Pilot Study: PCE Shoes

PCE, Shoes: 1997-2004

	Levels (Billions)		Average Annual Change 1997-2004
	1997	2004	
NIPA	41	54	4.2%
AIA	41	50	3.0%
Difference	0	4	

## NIPA Retail Control Method

- Total sales, by type of retailer, from Annual Retail Trade Survey (ARTS)
- Total sales allocated to items according to last (1997) Economic Census allocation
  - Reasonable assumption for shoe stores
  - Weak assumption for superstores

## AIA Commodity Flow Method

- Domestic supply from current Census Merchandise Trade Survey and Annual Survey of Manufacturers
- Share of domestic supply consumed by households estimated
- Transport, wholesale, and retail margins added

# NIPA Method: New Values

Retail-control extrapolator, 1997-2002

NIPA Extrapolator	Levels (Billions)			Average annual change 1997-2002	
	1997	2002			
	Pub	Pub	New	Pub	New
Shoe stores	18	20	21		
Superstores	4	8	2		
Others	17	20	18		
All stores	39	48	41	4.5%	1.0%
PCE:					
NIPA	41	50		4.0%	
AIA	41	46		2.4%	

# Feedback Loop Results

- AIA shoe extrapolator preferable
  - Domestic supply from current Census surveys
  - Fixed relationship applied to smaller level
- Basis for:
  - Monitoring commodity differences
  - incorporating improved estimates and methods in NIPA annual revisions

## VA Reconciliation: 2002 vs 1997

- A new balancing model that provides the statistical foundation to improve value added estimates.
  - Transparency of model
    - Generalized least squares
  - Quality assessments of source data
    - Sampling errors and staff expertise
  - Allocation of NIPA statistical discrepancy
    - By quality of source data
- Increased coverage of inputs in 2002 Economic Census means less reliance on GDI in setting levels of value added.
  - 2/3 coverage for 2002, up from 1/3 coverage for 1997