

The PCE Price Index: Core Issues

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BEA Advisory Committee Meeting

November 3, 2006

Measuring the Nation's Economy.



PCE Price Index: Context

- PCE prices produced as part of system of accounts (NIPAs)
- PCE price index re-weights and supplements BLS price data to fit scope, concepts, and methods in NIPAs
- Used for integrated macroeconomic analysis of economy using BEA's set of accounts
- Not designed for use in cost-of-living adjustments or for certain other purposes

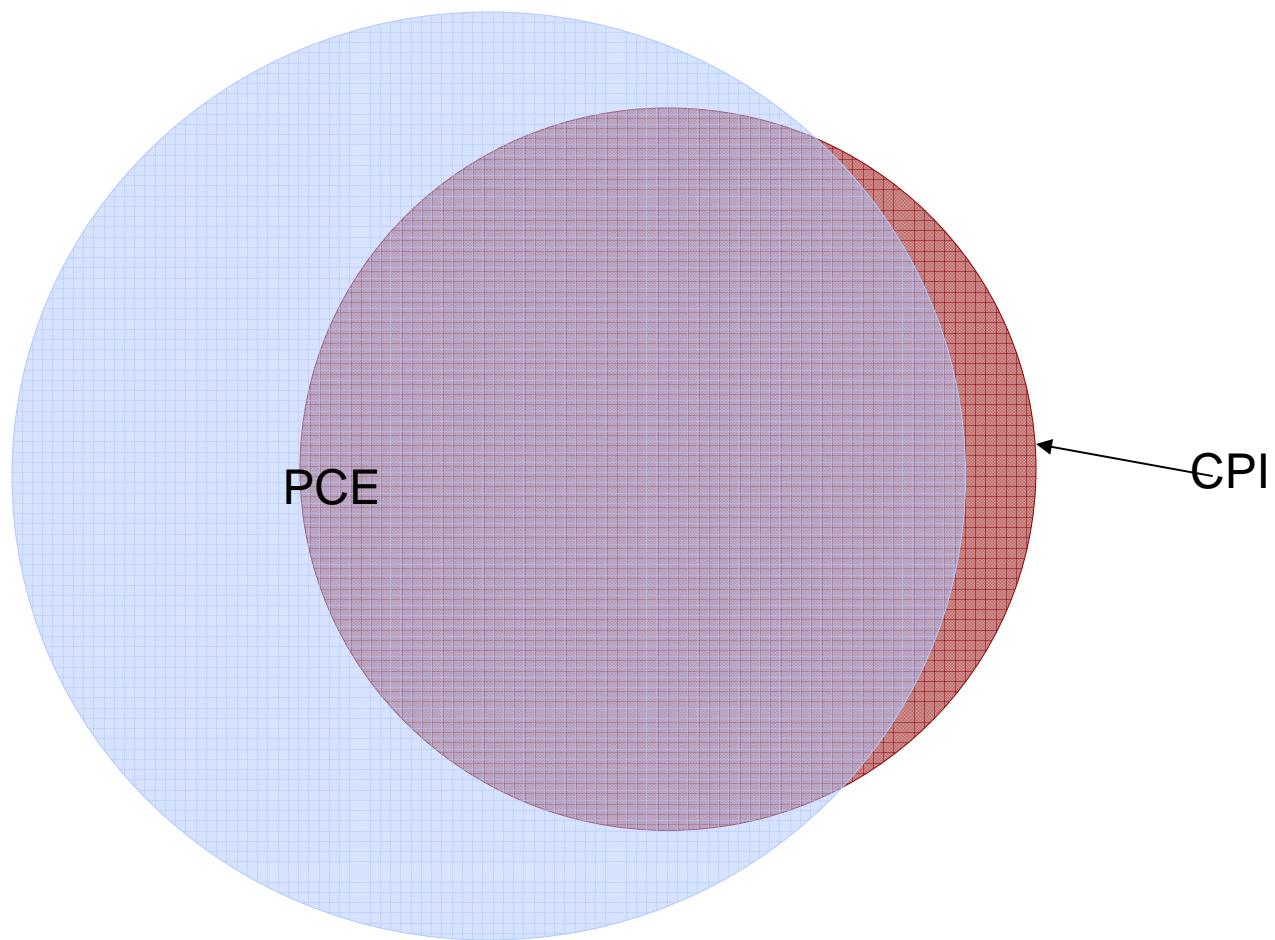


PCE Price Index: Scope

- PCE price index: An index of prices paid by the personal sector in the NIPAs
- Personal consumption expenditures include:
 - *Household* expenditures
 - Made by or on behalf of households
 - Imputed expenditures for housing and financial intermediation
 - Expenses of life insurance and pension plans
 - Certain goods and services received in kind
 - *Nonprofit* institution operating expenses
- PCE prices used as deflators to measure real PCE



Scope of PCE vs. CPI



PCE and CPI Weights

CPI Expenditure Category	December 2005		
	PCE Share	CPI Relative Importance	PCE less CPI
All items	100.0	100.0	--
Food and beverages	13.8	15.1	-1.3
Housing	23.5	42.4	-18.9
Shelter	14.9	32.3	-17.4
Other housing	8.6	10.1	-1.5
Apparel	4.6	3.8	0.8
Transportation	11.7	17.4	-5.7
Medical care	20.6	6.2	14.4
Recreation	8.6	5.6	3.0
Education and communication	5.1	6.0	-0.9
Other goods and services	12.1	3.5	8.6
Addendum: Energy	5.9	8.7	-2.8

PCE includes third-party payments, which account for most of medical care

PCE includes expenses of nonprofits, imputed financial services

Scope-adjusted Weights

CPI Expenditure Category	2004		
	PCE Share	CPI Relative Importance	PCE less CPI
All items	100.0	100.0	--
Food and beverages	17.4	15.3	2.1
Housing	31.0	42.0	-11.0
Shelter	20.0	32.7	-12.7
Other housing	10.9	9.3	1.7
Apparel	6.0	3.8	2.1
Transportation	17.2	17.4	-0.2
Medical care	7.1	6.1	1.0
Recreation	8.2	5.7	2.4
Education and communication	5.5	5.8	-0.3
Other goods and services	7.7	3.8	3.9

Rental values from CES & PCE are similar, but PCE total is much higher than CES

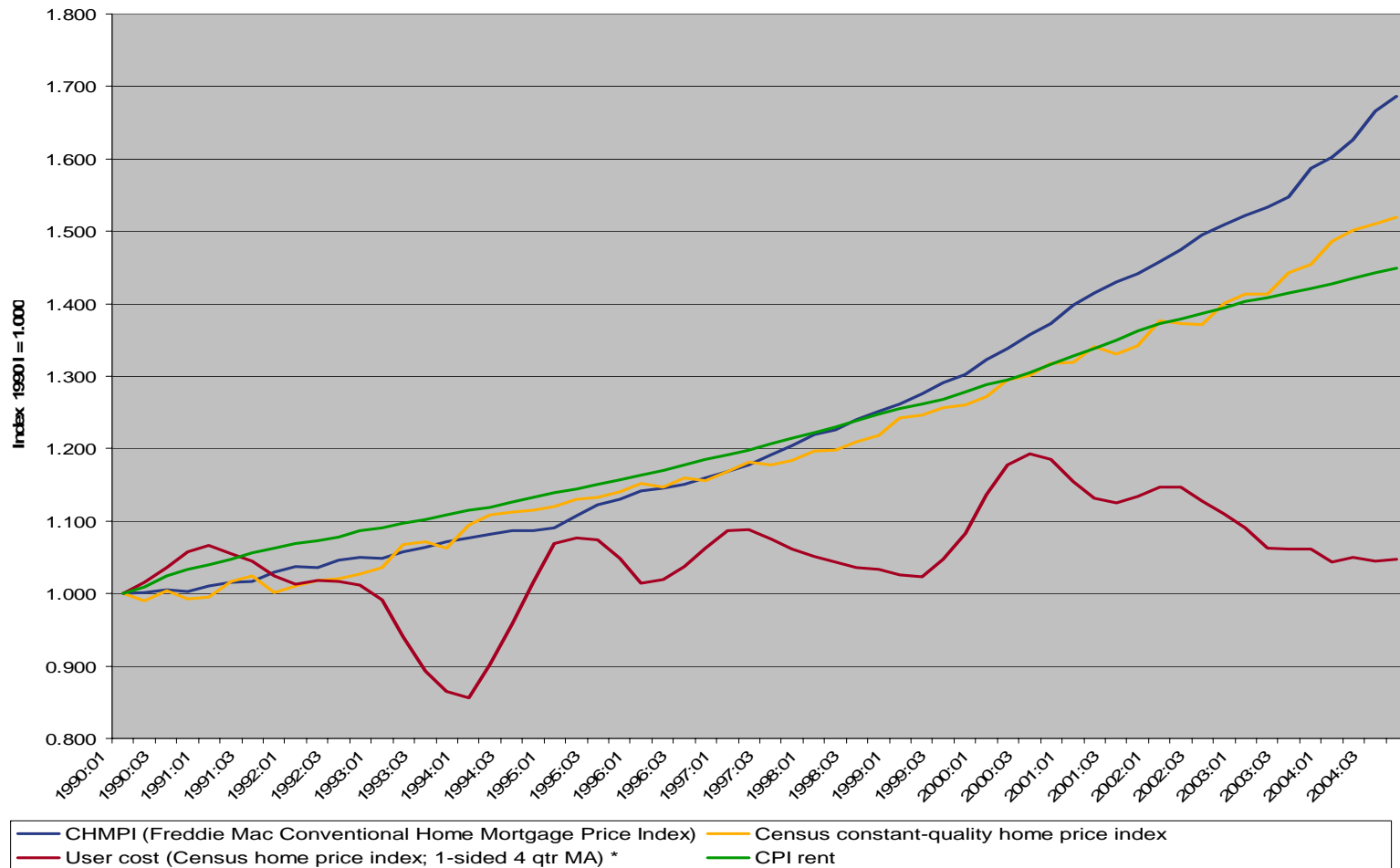


Housing in the PCE Price Index

- PCE housing is a measure of the current services of housing
- Services measured by rental value
- Rental value of housing services applies to both tenant-occupied and owner-occupied housing
- Housing PCE \approx CPI Shelter
 - PCE for owner-occupied space rent deflated by CPI for owners' equivalent rent
 - PCE for tenant-occupied space rent deflated by CPI for tenants' rent
- User costs, which include net gains (losses) from changes in the value of houses, are much more volatile than owners' equivalent rent



Housing Prices and Costs



* Source: Randal Verbrugge estimates, "The Puzzling Divergence of Rents and User Costs, 1980-2002," draft paper.



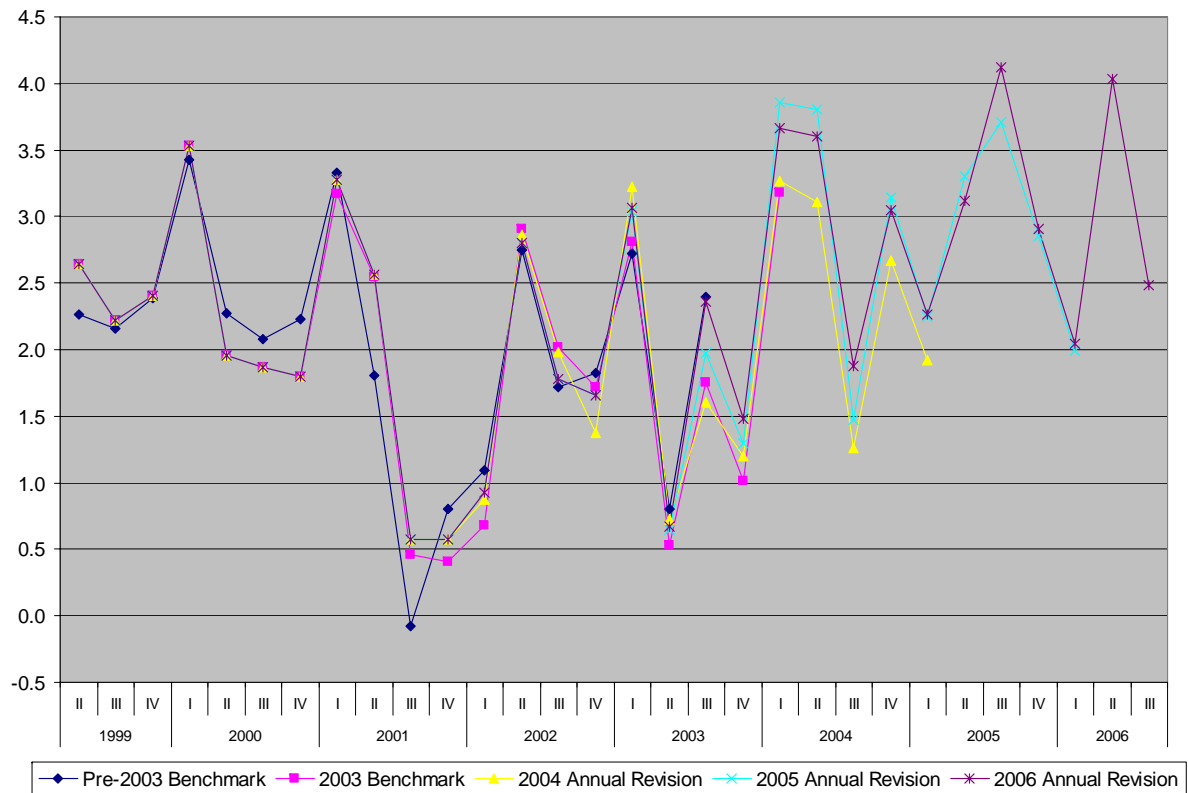
Revisions to the PCE Price Index

- Sources of revision are best understood in terms of the price indexes and deflation methods used in the PCE price index
 - CPI-based deflators
 - PPI-based deflators
 - Input cost indexes
 - Other
- Largest revisions are in *other*, based on:
 - Incorporation of estimates based on annual source data
 - Definitional changes
 - Methodological changes



PCE Price Index by Vintage

Percent Change from Previous Quarter, Annual Rate

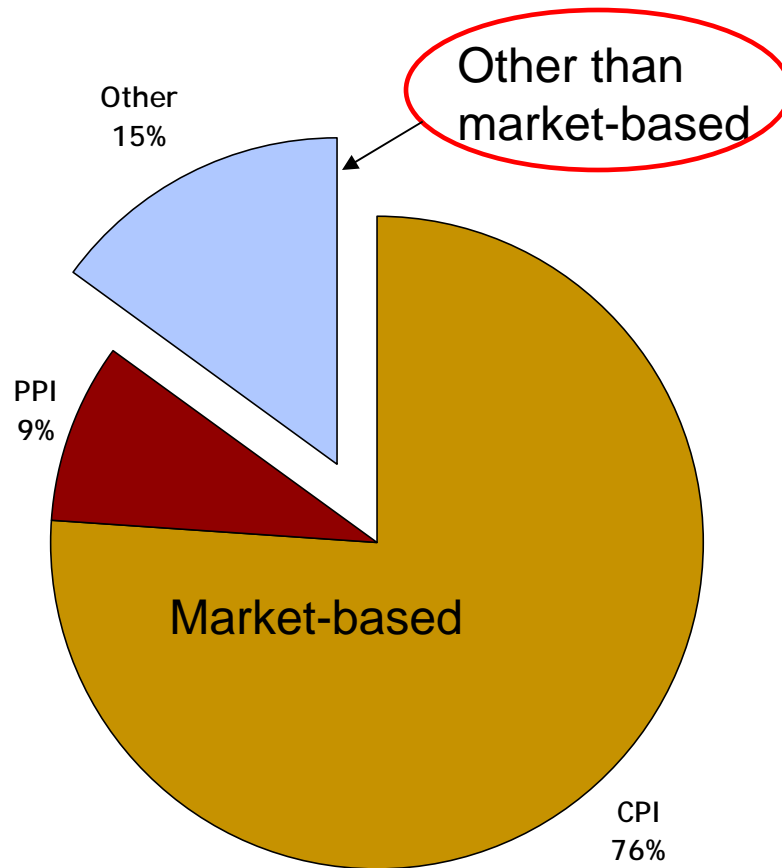


PCE Market-Based Price Index

- Introduced in 2003 Benchmark Revision
- Includes all PCE categories deflated with a CPI or PPI component index
 - PPIs used primarily for medical care and financial services out of scope of CPI
- “Non-market” PCE includes:
 - Nonprofit organizations and financial services measured by expenses, deflated by input cost indexes
 - Imputed goods and services, where most deflators are implicit, based on independent current dollar and real dollar estimates
- Market-based index less subject to revision than overall PCE price index

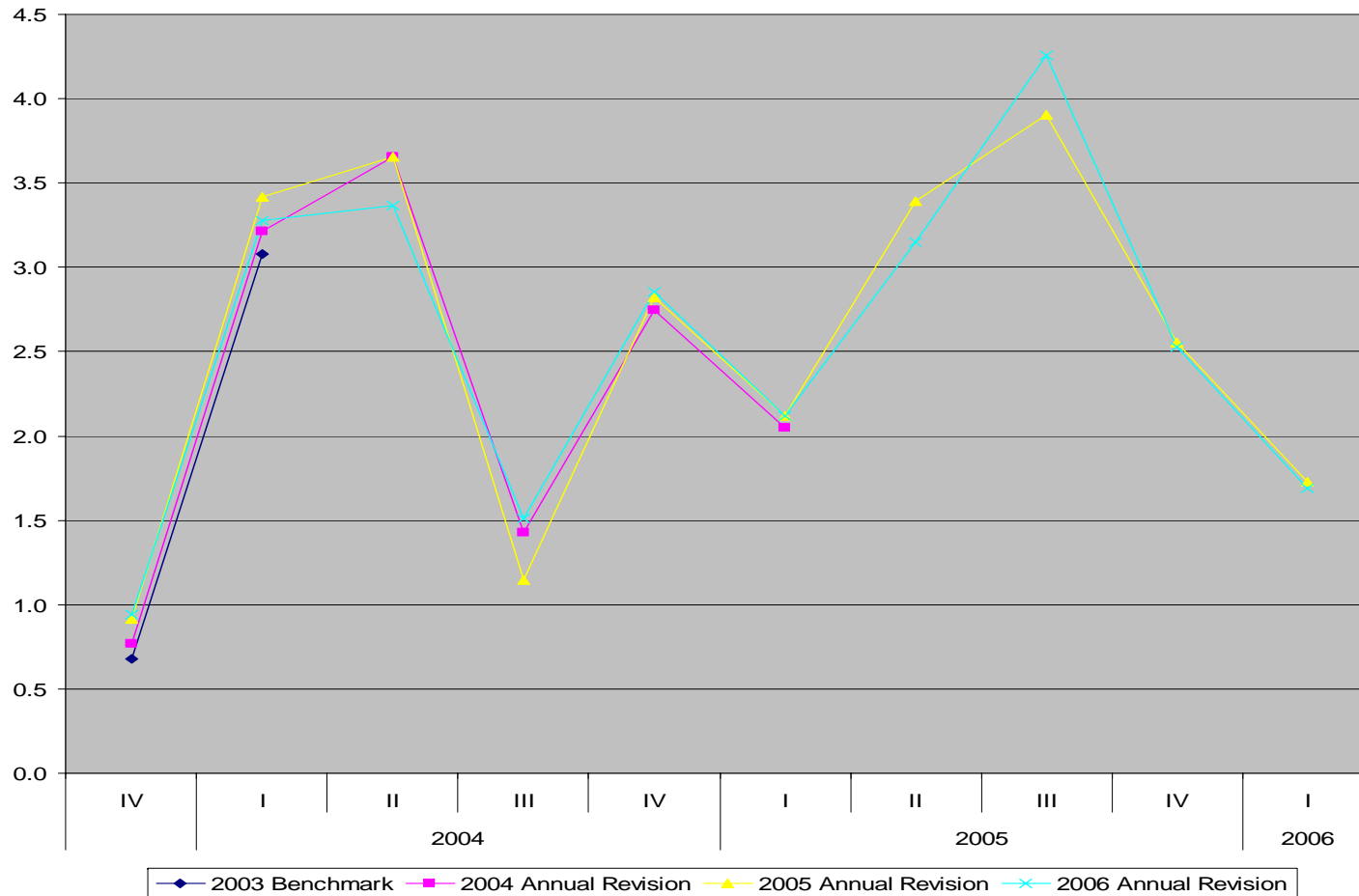


Composition of the PCE Price Index



PCE Market-Based Price Index

Percent Change, Annual Rate



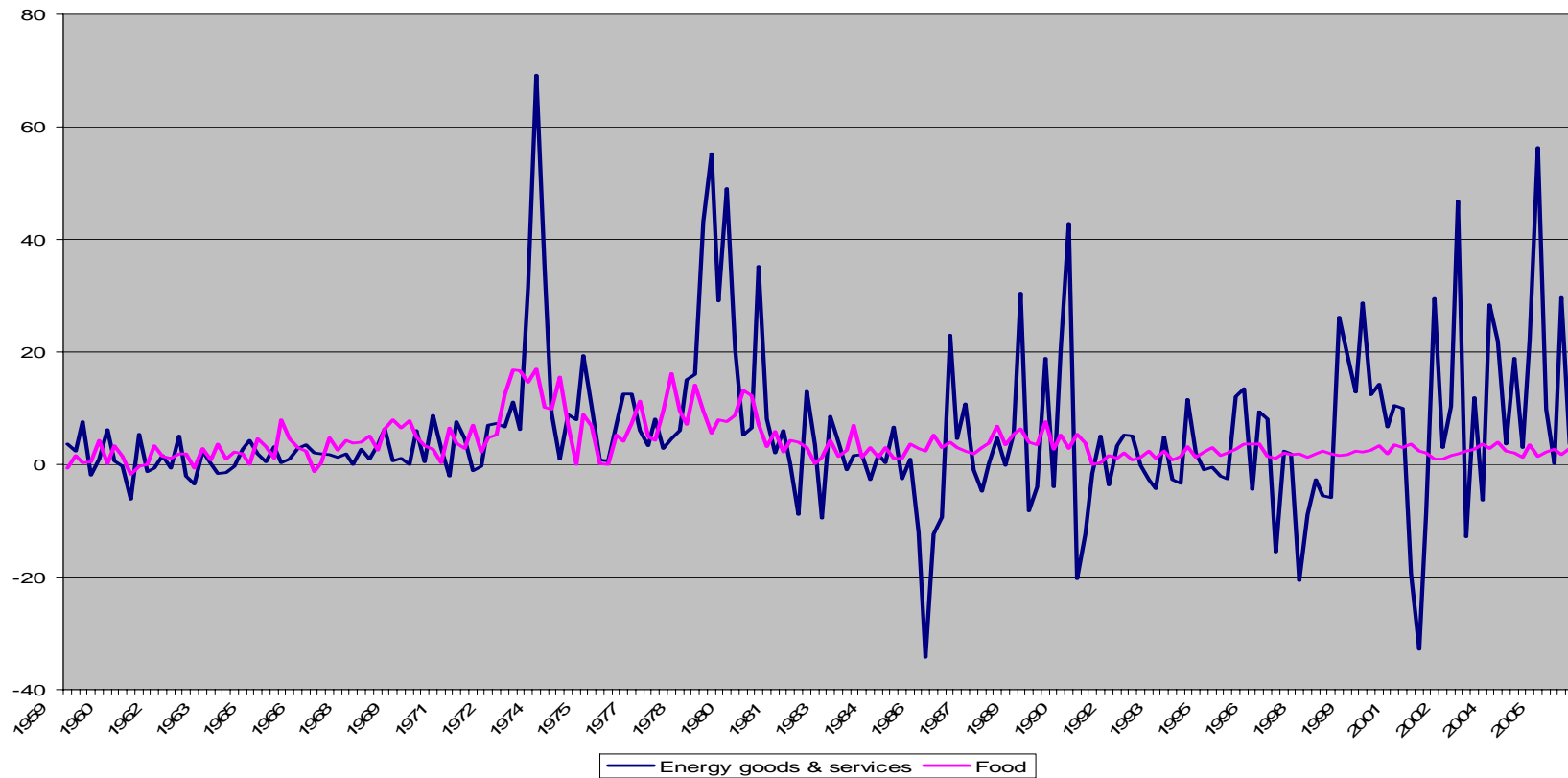
The Core PCE Price Index

- The core PCE price index excludes food and energy
- The intent of the core index is to strip out particularly volatile prices to provide a better indicator of underlying inflationary trends
- Energy prices are quite volatile and have become even more volatile over time
- Food prices are not nearly as volatile, and volatility has lessened significantly over time because of:
 - Increased importance of food away from home, whose prices are not volatile
 - Lessened volatility of food at home prices due to decreased importance of fresh foods
 - In recent years, food price volatility has been among the lowest of the broad PCE categories



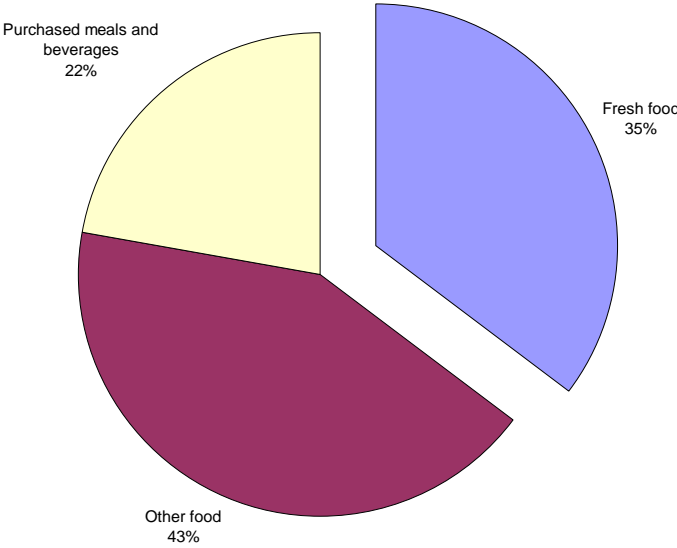
PCE Food and Energy Price Indexes

Percent change from previous quarter, annual rate

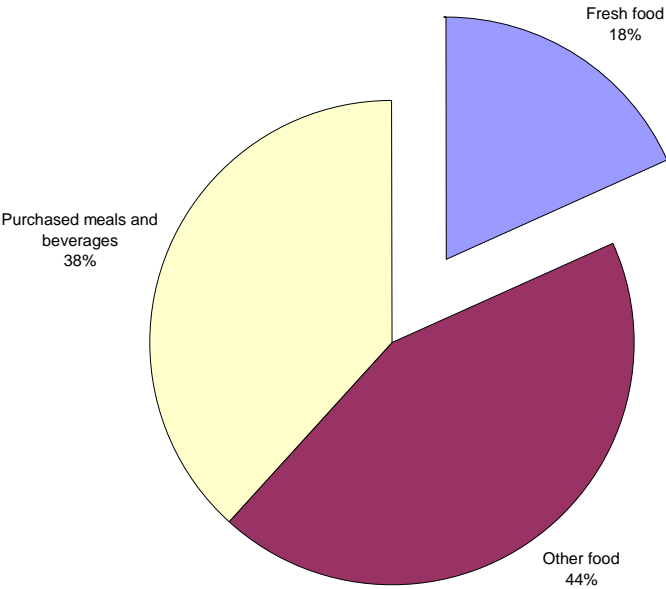


PCE Food Shares

1959



2005



Alternatives to PCE Core Index

- A redefined core index, perhaps excluding energy and “non-market prices”
- A redefined core index based on excluding volatile individual price changes
- A “weighted-median” price index (Cleveland Fed)
- “Trimmed mean” excluding prices with large changes on a monthly basis (Dallas Fed)
- For further discussion, see Appendix material

