

### Comments on "Measuring the Rapidly Changing Economy"

### BEA Advisory Committee Meeting May 1st, 2009

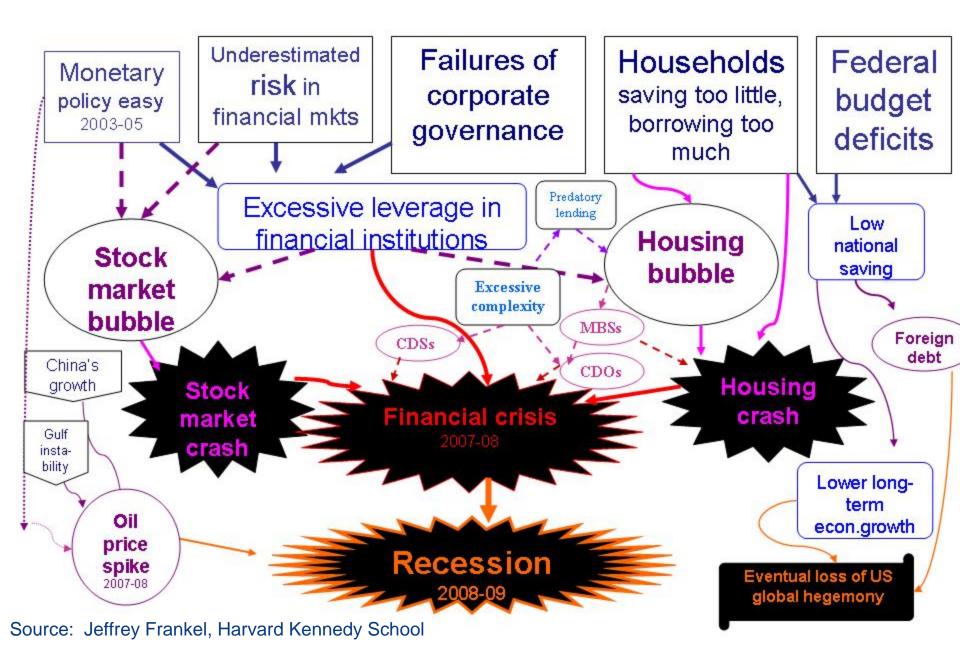
Bart van Ark Vice President and Chief Economist





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### Can we fit the current economy in one accounting system ?



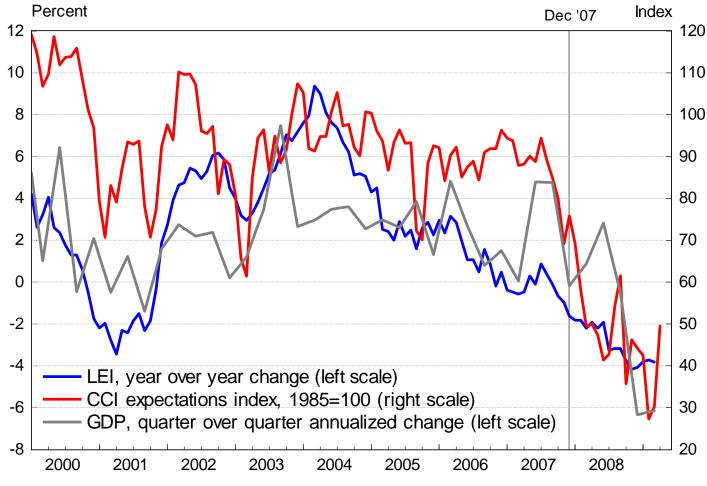
## U.S. forecast shows leveling off in decline of consumer spending but business conditions remain weak

| 2008  |   | 20   | 09   |  |   | 2010   |   | 2009   | 2010  |
|-------|---|--|--|--|---|--|---|--|---|
| Q4*   | Q1  | Q2   | Q3   | Q4   | Q1  | Q2   | Q3  | 2009   | 2010  |
| -6.3  | -6.1  | -1.5   | 0.4  | 2.3  | 2.1   | 1.5  | 2.4   | -2.7   | 1.6   |
| -8.3  | -1.8  | -0.3   | 0.9  | 1.3  | 1.8   | 1.9  | 2.0   | -0.9   | 1.5   |
| -4.3  | 2.2   | -0.3   | 1.6  | 1.5  | 1.4   | 2.4  | 2.6   | -0.9   | 1.7   |
| 0.66  | 0.53  | 0.52   | 0.53   | 0.59   | 0.64  | 0.66   | 0.76  | 0.54   | 0.73  |
| -21.7 | -37.9   | -19.8  | -12.6  | -6.6   | 3.0   | 1.0  | 7.5   | -17.8  | -2.2  |
| -25.8 | -103.7  | -65.3  | -56.1  | -8.7   | 27.4  | 25.4   | 31.6  | -57.6  | 29.6  |
| -23.6 | -30.0   | -14.7  | -11.3  | -6.6   | 2.3   | 3.2  | 4.2   | -12.7  | -1.7  |
| 1265  | 1252  | 1199   | 1194   | 1191   | 1220  | 1273   | 1291  | 1209   | 1285  |
| 6.9   | 8.1   | 8.9  | 9.5  | 9.9  | 10.1  | 10.1   | 10.1  | 9.1  | 10.1  |
|       | -6.3<br>-8.3<br>-4.3<br>0.66<br>-21.7<br>-25.8<br>-23.6<br>1265 | -6.3-6.1-8.3-1.8-4.3 <b>2.2</b> 0.660.53-21.7 <b>-37.9</b> -25.8-103.7-23.6-30.012651252 | -6.3-6.1-1.5-8.3-1.8-0.3-4.3 <b>2.2</b> -0.30.660.530.52-21.7-37.9-19.8-25.8-103.7-65.3-23.6-30.0-14.7126512521199 | -6.3-6.1-1.50.4-8.3-1.8-0.30.9-4.3 <b>2.2</b> -0.31.60.660.530.520.53-21.7-37.9-19.8-12.6-25.8-103.7-65.3-56.1-23.6-30.0-14.7-11.31265125211991194 | -6.3-6.1-1.50.42.3-8.3-1.8-0.30.91.3-4.3 <b>2.2</b> -0.31.61.50.660.530.520.530.59-21.7-37.9-19.8-12.6-6.6-25.8-103.7-65.3-56.1-8.7-23.6-30.0-14.7-11.3-6.612651252119911941191 | -6.3-6.1-1.50.42.32.1-8.3-1.8-0.30.91.31.8-4.3 <b>2.2</b> -0.31.61.51.40.660.530.520.530.590.64-21.7-37.9-19.8-12.6-6.63.0-25.8-103.7-65.3-56.1-8.727.4-23.6-30.0-14.7-11.3-6.62.3126512521199119411911220 | -6.3-6.1-1.50.42.32.11.5-8.3-1.8-0.30.91.31.81.9-4.3 <b>2.2</b> -0.31.61.51.42.40.660.530.520.530.590.640.66-21.7-37.9-19.8-12.6-6.63.01.0-25.8-103.7-65.3-56.1-8.727.425.4-23.6-30.0-14.7-11.3-6.62.33.21265125211991194119112201273 | -6.3-6.1-1.50.42.32.11.52.4-8.3-1.8-0.30.91.31.81.92.0-4.3 <b>2.2</b> -0.31.61.51.42.42.60.660.530.520.530.590.640.660.76-21.7-37.9-19.8-12.6-6.63.01.07.5-25.8-103.7-65.3-56.1-8.727.425.431.6-23.6-30.0-14.7-11.3-6.62.33.24.212651252119911941191122012731291 | $Q4^*$ $Q1$ $Q2$ $Q3$ $Q4$ $Q1$ $Q2$ $Q3$ -6.3-6.1-1.5 $0.4$ $2.3$ $2.1$ $1.5$ $2.4$ $-2.7$ -8.3-1.8-0.3 $0.9$ $1.3$ $1.8$ $1.9$ $2.0$ $-0.9$ -4.3 $2.2$ -0.3 $1.6$ $1.5$ $1.4$ $2.4$ $2.6$ $-0.9$ $0.66$ $0.53$ $0.52$ $0.53$ $0.59$ $0.64$ $0.66$ $0.76$ $0.54$ -21.7-37.9-19.8 $-12.6$ $-6.6$ $3.0$ $1.0$ $7.5$ $-17.8$ -25.8 $-103.7$ $-65.3$ $-56.1$ $-8.7$ $27.4$ $25.4$ $31.6$ $-57.6$ -23.6 $-30.0$ $-14.7$ $-11.3$ $-6.6$ $2.3$ $3.2$ $4.2$ $-12.7$ 1265 $1252$ $1199$ $1194$ $1191$ $1220$ $1273$ $1291$ $1209$ |

#### Source: The Conference Board

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## The Conference Board's indexes show no definitive signs of recovery yet, but intensity of decline levels off



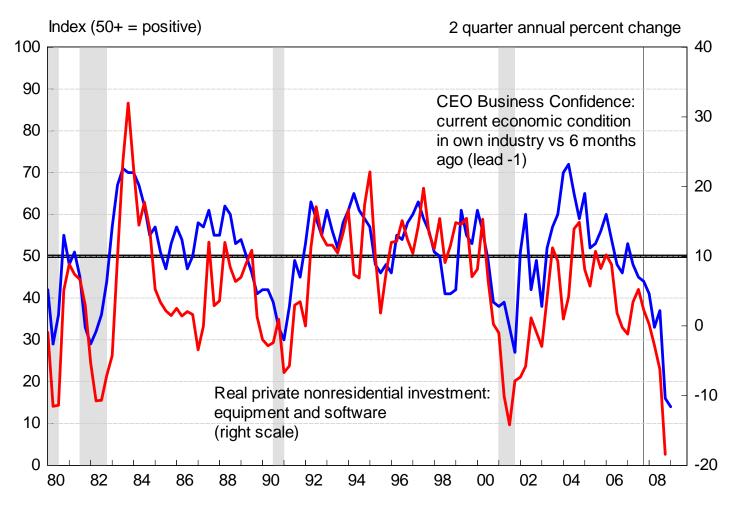
Note: Shaded areas represent U.S. recessions

Sources: BEA, National Bureau of Economic Research, The Conference Board

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## CEOs continue to keep a tight hold on their business investment spending reins



Note: Shaded areas represent U.S. recessions Sources: BEA, The Conference Board

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### Link between theory and practice in national accounting is key to Its relevance

- As economic policy priorities change, (national) accounting needs to find a balance between a sound theoretical basis and flexibility in applications
- In other words: the house needs to be build so that it can serve many different dwellers
- The foundations of SNA (production, income and expenditure) are strong
- "Real" and "financial" sources of growth, as well as their relationship, need to be analyzed
- But integration and comprehensiveness is key:
  - Complete production and wealth accounts
  - Employment, human capital and the knowledge economy

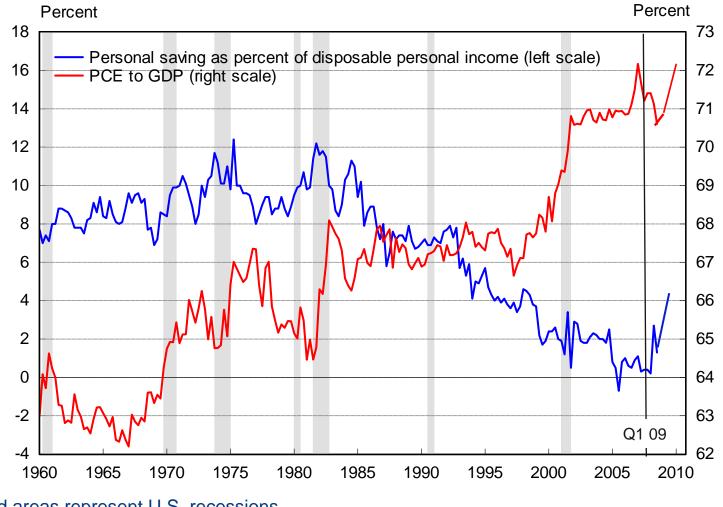
How did we get here? Where are we now? Where are we heading?

#### A few issues

- Savings: why are savings shares rising (and are consumption shares falling)?
- <u>Business cycle indicators</u>: do we need more service activity, and does NIPA
- <u>Industry level measures</u>: trouble with services persists with finance industry in spotlight today

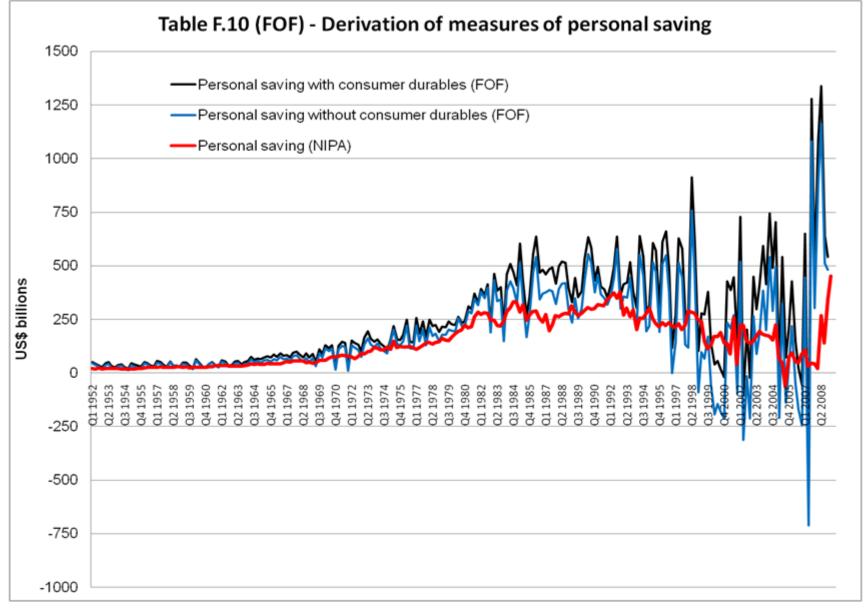


## While savings shares rise, consumption shares remain volatile

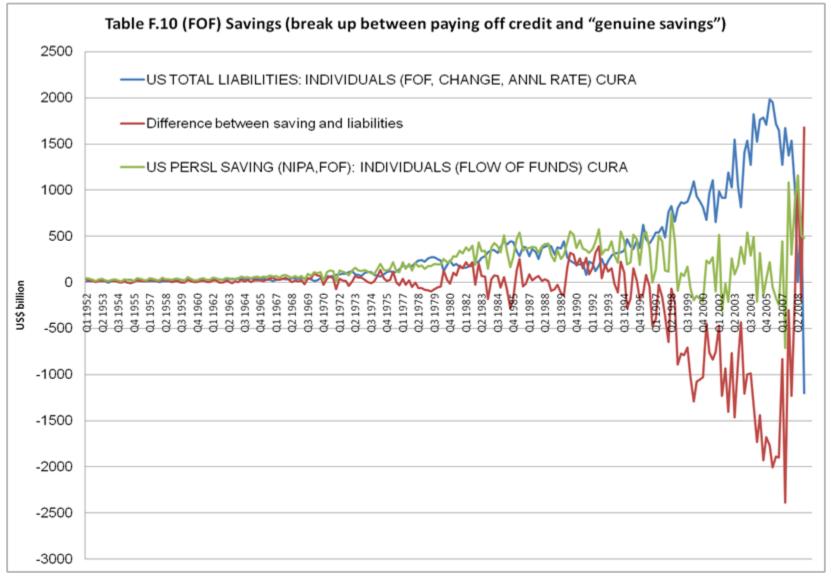


Note: Shaded areas represent U.S. recessions Sources: BEA, The Conference Board

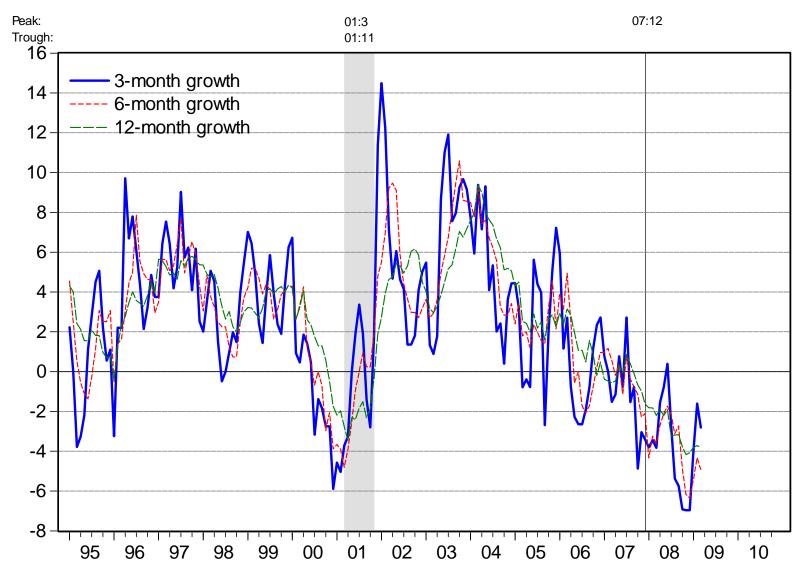
### But how rapidly do savings rise and why? NIPA vs. FOF



# Difference between liabilities and savings determines "paying off credit"

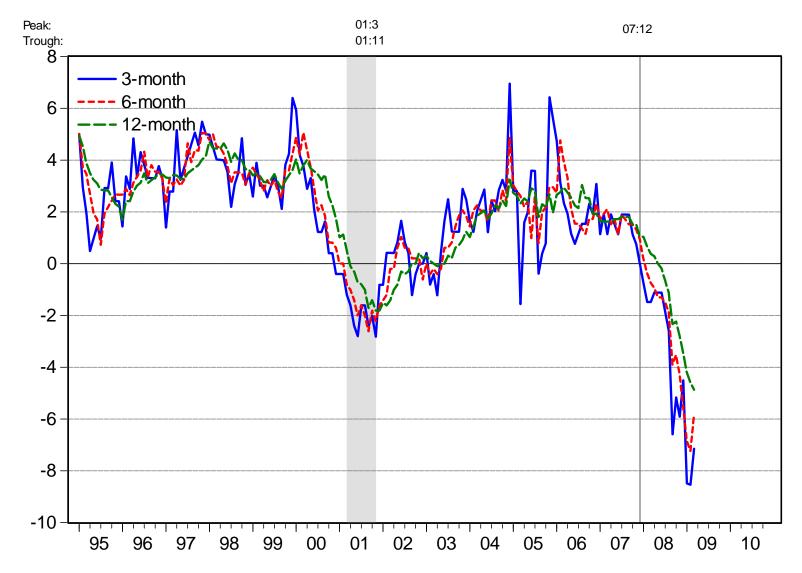


#### **Downward trend on the Leading Economic Index continues**



Note: Shaded areas represent recessions as determined by the NBER Business Cycle Dating Committee.

#### .... as well as for Coincident Economic Index



Note: Shaded areas represent recessions as determined by the NBER Business Cycle Dating Committee.

### Business cycle indicators consist of three components – Lagging and Coincident make more use of NIPA than Leading

|                             | Table 1 | Summary of L | I.S. Compos | atte E | conomic | lind | 9X98   |   |        |   |        |   |
|-----------------------------|---------|--------------|-------------|--------|---------|------|--------|---|--------|---|--------|---|
|                             |         | 2008         |             |        |         |      |        |   |        |   | 2009   |   |
|                             | Sep     | Oct          | Nov         |        | Dec     |      | Jan    |   | Feb    |   | Mar    |   |
| Leading index               | 100.6   | 99.6         | 98.8        | r      | 98.8    |      | 98.6   | r | 98.4   | г | 96.1   | р |
| Percent change              | .0      | -1.0         | 8           | r      | .0      | r    | 2      | r | 2      | Г | 3      | p |
| Diffusion Index             | 40.0    | 20.0         | 20.0        |        | 30.0    |      | 30.0   |   | 55.0   |   | 35.0   |   |
| Coincident Index            | 104.6   | 104.8        | 104.2       |        | 103.4   | r    | 102.5  | r | 101.9  | р | 101.5  | р |
| Percent change              | -1.1    | .2           | -,6         |        | 8       | r -  | 9      | Г | 6      | p | 4      | p |
| Diffusion Index             | 0.0     | 75.0         | 25.0        |        | 0.0     |      | 0.0    |   | 25.0   |   | 50.0   |   |
| Lagging index               | 113.5   | 113.6        | 114.3       |        | 114.2   |      | 114.0  | r | 113.7  | р | 113.3  | р |
| Percent change              | .4      | .1           | .6          |        | 1       |      | 2      |   | 3      | p | 4      | p |
| Diffusion Index             | 50.0    | 14.3         | 71.4        |        | 42.9    |      | 28.6   |   | 21.4   |   | 28.6   | - |
| Coincident-lagging<br>ratio | 92.2    | 92.3         | 91.2        |        | 90.5    | r    | 89.9   | r | 89.6   | р | 89.6   | p |
|                             | Mar to  | Apr to       | May to      |        | Jun to  |      | Jul to |   | Aug to |   | Sep to |   |
|                             | Sep     | Oct          | Nov         |        | Dec     |      | Jan    |   | Feb    |   | Mar    |   |
| Leading index               |         |              |             |        |         |      |        |   |        |   |        |   |
| Percent change              | -1.4    | -2.4         | -3.1        |        | -3.2    |      | -2.8   |   | -2.2   |   | -2.5   |   |
| Diffusion Index             | 30.0    | 30.0         | 30.0        |        | 30.0    |      | 30.0   |   | 20.0   |   | 20.0   |   |
| Coincident index            |         |              |             |        |         |      |        |   |        |   |        |   |
| Percent change              | -2.0    | -1.8         | -2.2        |        | -2.8    |      | -3.5   |   | -3.7   |   | -3.0   |   |
| Diffusion Index             | 0.      | 0.           | 25.0        |        | 25.0    |      | 25.0   |   | .0     |   | .0     |   |
| Lagging index               |         |              |             |        |         |      |        |   |        |   |        |   |
| Percent change              | 1.2     | 1.4          | 2.3         |        | 2.2     |      | 1.3    |   | .6     |   | -2     |   |
| Diffusion Index             | 57.1    | 42.9         | 57.1        |        | 57.1    |      | 42.9   |   | 57.1   |   | 42.9   |   |

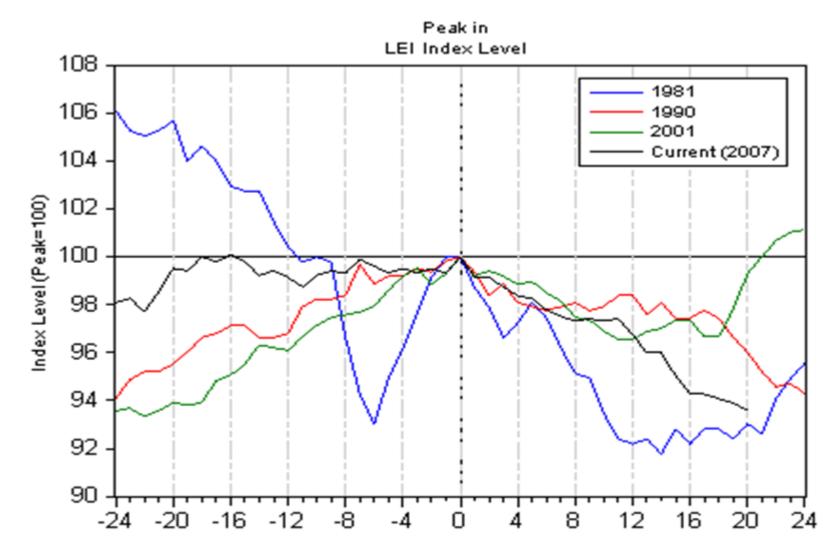
p Preliminary, r Revised (noted only for index levels and one-month percent changes), c Corrected.

Sources: BEA, National Bureau of Economic Research, The Conference Board

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## Downturn in LEI level has not been has been faster than in previous recessions except for 1981-1982



Sources: BEA, National Bureau of Economic Research, The Conference Board

### Composition of The Conference Board Coincident Economic Index<sup>™</sup> (CEI) for the U.S.

- Employees on Non-Agricultural Payrolls, BLS
- Index of Industrial Production, FED
- Personal Income less Transfer Payments, BEA, NIPA
- Manufacturing and Trade Sales, BEA, NIPA





## Composition of The Conference Board Lagging Economic Index<sup>™</sup> (LAG) for the U.S.

- Mfg & Trade Inventories to Sales Ratio, BEA
- Average Duration of Unemployment, BLS
- Consumer Installment Credit/Income Ratio, Federal Reserve, BEA
- Commercial and Industrial Loans Outstanding, Federal Reserve
- Average Prime Rate Charged by Banks, Federal Reserve
- Change in Labor Cost/Unit Output in Manufacturing, BEA, Federal Reserve
- Change in CPI for Services, BLS

# Composition of The Conference Board Leading Economic Index<sup>™</sup> (LEI) for the U.S.

- Yield Spread (10-Year minus Federal Funds), Federal Reserve
- Money Supply (M2), Federal Reserve and BEA (PCE deflator)
- Stock Prices (S & P 500), Standard & Poors
- Average Weekly Hours for Manufacturing, BLS
- Building Permits, Private Housing, Census
- Average Weekly Initial Claims for Unemployment Insurance, BLS
- Vendor Performance, (manufacturing) ISM
- Manufacturer's New Orders for Non-Defense Capital Goods, deflated, Census, BLS
- Manufacturer's New Orders for Consumer Goods and Materials, deflated, Census, BLS
- Index of Consumer Expectations, University of Michigan



### A greater need for service measures in Business Cycle Indicators?

- Manufacturing dominance in business cycle indicators → two hypotheses:
  - Manufacturing provides better leads on business cycles
  - Lack of data makes BCI biased
- Demand for services often as cyclical as for goods (or sometimes even more)
- In addition to business sentiment indexes for services, we would like to move more solid index such as orders for services and non-manufacturing PMI
- Even in CEI and LAG more specific services may help
- Role of money supply in LEI under discussion



### Reconsidering a miracle

- In preparation for some recent teaching, I went back to something that was a hot topic not long ago, and will be again if and when the crisis ends: the apparent lag of European productivity since 1995. One recent, seemingly authoritative study is van Ark et al; and I noticed something that gave me pause.
- In their paper, van Ark etc. identify the service sector as the main source of America's pullaway which is the standard argument. Within services, roughly half they attribute to distribution roughly speaking, the Wal-Mart effect. OK.
- But the other half is a surge in US productivity in financial and business services, not matched in Europe. And all I can say is, whoa!
- First of all, how do we even measure output of financial services? If I read <u>this BEA paper</u> correctly, we more or less use "checks cashed" or, more broadly, the number of transactions undertaken. This may be the best we can do, but it's a pretty weak measure of actual work done by the financial system.
- And given recent events, are we even sure that the expansion of the financial system was doing anything productive at all?
- In short, how much of the apparent US productivity miracle, a miracle not shared by Europe, was a statistical illusion created by our bloated finance industry?
- Dean Baker has <u>argued for some time</u> that, properly measured, the productivity gap between America and Europe never happened. I'm becoming more sympathetic to his point of view.



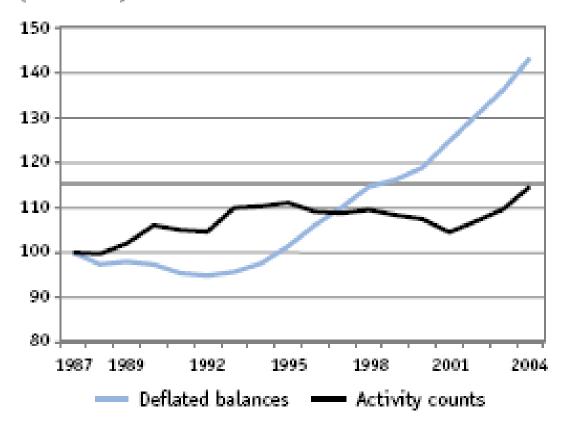
<u>Response by my co-author Robert Inklaar, University of Groningen</u>

- How much of the US productivity miracle post-1995 was a statistical illusion? Not as much as Krugman and others would like to believe, according to our research.
- First, US productivity growth in the financial sector was not much faster than in Europe: the differences shown in the van Ark article are mostly due to business services. This means firms like IBM, not Citigroup. Measurement issues are tricky in business services as well, but US statistics in this area are no worse than those in Europe.
- Second, it is more likely that European productivity growth in the financial sector was overstated compared to the US. In the US statistics, bank output is measured by looking at the number of loans and transactions (as well as explicit fees). If the European methodology had been used, bank output growth would have been twice as fast. Also, don't forget that some European countries like Ireland and Spain had very bubbly property markets too.
- The big question is of course how US and European productivity growth will evolve during and after the current recession, but the US performance post-1995 still looks pretty strong compared to Europe.



### The use of activity counts provides a more reasonable view of U.S. real output growth in commercial banking

US Commercial Bank Output Volumes: Deflated Balances vs. Activity Counts, 1987-2004 (1987–100)



Source: Inklaar, Timmer and van Ark, International Productivity Monitor, Spring 2008

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#### Response by Susanto Basu, Boston University

- Over-measuring financial service output is not as big a problem as it seems if you just look at the industry data. The reason is that most financial services are provided to businesses, and are counted as a subtraction from the value added of the business that "buys" the service. Thus, if financial service output is measured too high, implicitly the output of lots of other industries is measured too low, and the net effect on GDP is small.
- The reason I say "small" and not "zero" is that services provided to consumers \*are\* counted as part of GDP. But there, the transactions-based approach may not be so bad. (Of course, in recent years, lots of these services were sold to foreign businesses and thus counted as exports, which also contribute to GDP. So it's a growing problem–or was one!)
- I am very sympathetic to the basic point that we need a good measure of "what do banks (financial firms) do," for a host of reasons, including system risk regulation. But measuring national productivity may not be the most pressing reason.



## In virtually all service industries, output measures suffer from unclear output concept or bad prices

Share of Value Added in Market Services in Ten European Countries Deflated using A, B or C-Methods around the Year 2000 (per cent)

| ISIC rev. 3 code | Industry                   | A  | в  | c  |  |  |  |  |
|------------------|----------------------------|----|----|----|--|--|--|--|
| Average          |                            |    |    |    |  |  |  |  |
| 50-52            | Wholesale and retail trade | 0  | 79 | 21 |  |  |  |  |
| 52               | Retail trade               | 0  | 79 | 21 |  |  |  |  |
| 55               | Hotels & restaurants       | 67 | 26 | 7  |  |  |  |  |
| 60-63            | Transport & storage        | 9  | 67 | 24 |  |  |  |  |
| 64               | Post & telecommunications  | 9  | 80 | 11 |  |  |  |  |
| 65-67            | Financial intermediation   | 0  | 57 | 43 |  |  |  |  |
| 65               | Banking                    | 0  | 68 | 32 |  |  |  |  |
| 71-74            | Business services          | 8  | 44 | 48 |  |  |  |  |
| 90-93            | Social & personal services | 15 | 44 | 42 |  |  |  |  |
|                  | Market services            | 10 | 59 | 31 |  |  |  |  |

Notes: Classification into A, B and C-methods are by national statistical offices, based on Eurostat (2001). A-method is defined as most appropriate, B-method as acceptable and C-method as unacceptable. Average share is calculated based on information for Austria, Belgium, Benmark, Finland, France, Germany, Italy, Netherlands, Sweden and UK. For each country and each industry we use information on the share of value added deflated using A, B or C-methods, and for each industry (as well as the total average) these shares are averaged across countries.

Source: Inklaar, Timmer and van Ark, International Productivity Monitor, Spring 2008

#### Measurement problems due to increased share of ICT production and use

#### Industry

Output Primarily computers and other ICT goods. Solvable by using hedonic price indices, which is possible provided data availability

#### Services

Primarily "customised" services and public services (education, health, etc.). Should be tackled by detailed analysis of multiple dimensions of output by industry. Difficult both in methodological terms as well in terms of data

Input Primarily semiconductors. Can be solved with hedonic price indices, provided data availability and investment flow matrices.

Primarily ICT input. Can be solved by adjusting nominal input series with hedonic price indices. Feasible provided availability of investment flow matrices.

### Continued integration of accounting systems and comprehensiveness are key to develop a credible "real time" accounting system

- Finding a balance between "real time" and accuracy is important
- Coverage of services, and especially prices of services, remains the Achilles heel of the national accounts
- Focus on institutional units may provide more "real time" info than industry approach
- New Architecture goes beyond integration of macro-, industry accounts and flow-of-funds:
  - Employment
  - Intangibles: R&D and beyond
- Official statistics need to be as precise as possible
  - ... but it is sometimes better to be "imprecisely right than precisely wrong" (Keynes)

... requiring a balance between research and official statistics

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