The Economic Outlook

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Inforum
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**Why Model?**

- Economic and social data -- raw material for reports and studies -- in comprehensive databank used for analysis.

- Building models assists and test economists’ understanding on how the economy works.

- Assist the economic forecasting *process*. Leverage the historic record to detect future trends. Provide a *comprehensive and consistent* framework to assess assumptions and structures of an economic forecast.

- Simulate “counterfactual” to produce alternative scenarios and/or to evaluate policy measures or exogenous economic shocks.
Why would you want to forecast over 25 years?

- Policy makers need a tool to examine plausible economic growth paths, evaluate the sustainability of current policies, and illustrate impacts of changes in assumptions or policies.
  - Social Security and Medicare (SSA, CMS to 2085)
  - Energy Technology and Climate Change (DoE to 2035)
  - Infrastructure Investments (highways, education)

- Structural economic models provide context and consistency needed to organize assumptions about the future.

- We emphasize consistency of real demand and supply, prices, and nominal balances across the long run.

- Provides stable and plausible base line for scenario analysis.
**LIFT Interindustry Macro Model Schematic**

**Supply Block**
- Real Gross Output Demanded
- Imports of Goods and Services
- Labor Productivity
- Hours Worked
- Employment
- Unemployment

**Factor Income Block**
- Labor Compensation
- Indirect Taxes and Subsidies
- Capital Income and Depreciation

**Price Block**
- Product and Service Prices
- Consumption Prices
- Investment Prices
- Export Prices
- Monetary Policy / Interest Rates

**Input-Output Output Identity**

**Exogenous**
- Population Profile
- Labor Force*
- Government Spend
- Tax Rates*
- Global Demand
- Global Oil Prices
- Global Trade Prices
- Exchange Rates*

**Final Demand Block**
- Private Consumption
- Government Expenditures
- Equipment Investment
- Structures Investment (NR)
- Residential Investment
- Inventory change
- Exports of Goods and Services

**Real Incomes**
- Personal
- National

**Accountant Block**
- Personal Disposable Income
- Government Taxes
- Government Transfer Payments
- Government Expenditures
- Other Revenue
- Transfer Payments

**National Accounts: GDP = C + I + G + X – M = W + P + T**

**Household Balance:**
- S = PDI – C

**Government Balance:**
- NB = TR – (G + Tr + Int)

**Current Account Balance:**
- CA = X – M + NFI + NTrf

**National Income:**
- GNI = GDP + NFI
The Short Run Overview

- Growth prospects for 2011-12 are improved (3%), partly because 2010 was so restrained.

- QE2 and new budget-busting stimulus will work together to boost recovery over the next two years.

- Yet, foreclosure/bad debt overhang will continue to dampen growth.

- Consumers will continue to “delever” because of high unemployment and low net worth -- and new expectations concerning looming retirement.
Longer term forecast (to 2035):

- Potential GDP growth between 2.0 – 2.5%.
- Forecast assumes gradual rebalancing of private, government and external accounts.
- Weaker dollar, rising savings rate changes economic structure toward exports and away from consumption.
- Long run consequences of current fiscal recklessness will be a larger long term debt ratio.
- Health care spending (with or without reform) will dominant future of government spending and domestic production growth.
- All roads lead to tax reform. To pay for entitlements, government revenues will have to rise. How this is accomplished is important.
Deepest Post-War Recession in Employment

Employment year-on-year percentage growth

Source: Bureau of Labor Statistics
So Far, An Uneven Recovery

Real GDP year-on-year growth

Source: Bureau of Economic Analysis
## Short-term Outlook Overview

Real (Inflation-Adjusted) Quantities, Average Annual Growth Rates, Percent

<table>
<thead>
<tr>
<th></th>
<th>00-08</th>
<th>08-09</th>
<th>09-10</th>
<th>10-11</th>
<th>11-12</th>
<th>12-13</th>
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<tr>
<td>Gross domestic product</td>
<td>2.1</td>
<td>-2.7</td>
<td>2.8</td>
<td>3.0</td>
<td>3.2</td>
<td>3.1</td>
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<tr>
<td>Personal consumption</td>
<td>2.5</td>
<td>-1.2</td>
<td>1.7</td>
<td>2.9</td>
<td>2.6</td>
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<td>Nonresidential structures</td>
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<td>Exports</td>
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<td>3.7</td>
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<td>Imports</td>
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<td>9.3</td>
<td>6.0</td>
<td>3.6</td>
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<td>Government</td>
<td>2.2</td>
<td>1.6</td>
<td>1.0</td>
<td>0.4</td>
<td>0.2</td>
<td>1.1</td>
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<td>GDP deflator</td>
<td>2.6</td>
<td>0.9</td>
<td>0.6</td>
<td>1.0</td>
<td>2.4</td>
<td>2.6</td>
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<tr>
<td>Consumption deflator</td>
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<td>1.6</td>
<td>1.0</td>
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<th>2008</th>
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<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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<tbody>
<tr>
<td>Unemployment rate (%)</td>
<td>5.8</td>
<td>9.3</td>
<td>9.7</td>
<td>9.1</td>
<td>8.4</td>
<td>7.9</td>
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<tr>
<td>Current account ($ billions)</td>
<td>-675</td>
<td>-386</td>
<td>-433</td>
<td>-453</td>
<td>-503</td>
<td>-573</td>
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<tr>
<td>Federal net borrowing ($ bill)</td>
<td>-762</td>
<td>-1506</td>
<td>-1512</td>
<td>-1408</td>
<td>-1185</td>
<td>-1167</td>
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</table>
In a big hole: long recovery ahead.

Inforum’s annual GDP Gap

- gdpgap
- one
Monetary Policy : QE2

- At 0.1 interest rates, normal open market operations pushing on a string, liquidity trap.
- QE buys longer maturity bonds to lower LT interest rates.
- Effectiveness depends on signaling and expectations, results can be perverse.
- Need 2 instruments for 2 targets: Need pull as well as the push. QE would be much more effective with fiscal stimulus.
- But rising deficits raise doubts about long run debt. (Economy between a rock and a hard place)
So far bank reserves remain piled up.

Source: Federal Reserve Board
Fiscal Policy: Stimulus 2

Effectiveness muted given poor long-term budget outlook. Could be enhanced with credible medium-term deficit reduction and/or comprehensive tax restructuring.

CBO score for the Tax Relief, Unemployment Insurance Reauthorization and Job Creation Act of 2010

<table>
<thead>
<tr>
<th>Change in Revenues</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2011-15</th>
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<tbody>
<tr>
<td>Tax Rate Extension</td>
<td>-99.0</td>
<td>-149.1</td>
<td>-66.5</td>
<td>-330.5</td>
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<td>AMT + Estate Tax Relief</td>
<td>-90.4</td>
<td>-95.6</td>
<td>-12.6</td>
<td>-204.2</td>
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<tr>
<td>Investment Incentives and Other</td>
<td>-80.8</td>
<td>-72.8</td>
<td>-1.8</td>
<td>-110.1</td>
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<td>Payroll Tax Holiday</td>
<td>-67.2</td>
<td>-44.4</td>
<td>0.0</td>
<td>-111.7</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>-337.5</strong></td>
<td><strong>-362.0</strong></td>
<td><strong>-80.9</strong></td>
<td><strong>-756.4</strong></td>
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<table>
<thead>
<tr>
<th>Change in Spending</th>
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</thead>
<tbody>
<tr>
<td>Tax Relief/Other</td>
<td>2.2</td>
<td>39.4</td>
<td>38.8</td>
<td>80.4</td>
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<tr>
<td>Unemployment Insurance Extension</td>
<td>34.5</td>
<td>21.6</td>
<td>0.0</td>
<td>56.1</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>36.7</strong></td>
<td><strong>60.9</strong></td>
<td><strong>38.8</strong></td>
<td><strong>136.4</strong></td>
</tr>
</tbody>
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| Net Change in Deficits                      | 374.2 | 422.9 | 119.8 | 892.9   |

Source: Congressional Budget Office
The most significant problem remains: Balance Sheet problems among consumers, banks and others

- Effectiveness of monetary and fiscal policy are still held back by deleveraging.
- Consumers still need to reduce their debt load considerably.
- Around 25% of mortgage holders are under water (NV-66%, AZ,MI,FL~50%, CA-42%).
- Loss of paperwork impedes attempts at workouts.
- Banks are reluctant to lend without a better feel for long-term liabilities for mortgage-backed bonds.
- Solution is not to reduce interest rates or extend payment term, but to (automatically?) reduce mortgage principal. Force write-offs.
Household Net Worth: Looking Up, Slowly

Household Net Worth, Billions of $

$14 trillion !

Source: Federal Reserve Board
Total Balance by Delinquency Status
Percent Mortgage Balances 90+ Days Delinquent

Source: Federal Reserve Board
Number of New Foreclosures
Thousands of Consumers

Source: Federal Reserve Board
Household Liabilities
Percent of Household Disposable Income

Source: Federal Reserve Board
Longer term forecast (to 2035):

- Potential GDP growth between 2.0 – 2.5%.
- Forecast assumes gradual rebalancing of private, government and external accounts.
- Weaker dollar, rising savings rate changes economic structure toward exports and away from consumption.
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<td>Exports</td>
<td>6.5</td>
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<td>Unemployment rate (%)</td>
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<td></td>
<td></td>
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<tr>
<td>Percent of GDP</td>
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<tr>
<td>Current account</td>
<td>-3.1</td>
<td>-2.7</td>
<td>-2.0</td>
<td>-1.5</td>
<td>-1.1</td>
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<td>Federal net borrowing</td>
<td>-7.6</td>
<td>-4.8</td>
<td>-3.7</td>
<td>-3.3</td>
<td>-2.7</td>
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Long term potential growth is just above 2.0% (strong productivity, low labor force growth)
Long Term Overview:
Nominal Balances Converge to (almost) Zero

Net Lending as Percent of GDP
Household Savings Rate

Near term spurt because of deleveraging. More realistic expectations will drive slow consumption growth.
Oil/natural gas prices steady in real terms

Nominal Price indices: 2005 = 100

- Oil
- Natural gas
- GDP deflator


Indices:
- Oil
- Natural gas
- GDP

Indices values (2005 = 100): 0, 100, 200, 300, 400, 500
## Exchange rate assumptions

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<td>Euro</td>
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<td>-7.5</td>
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<td>-2.0</td>
<td>-1.4</td>
<td>-1.0</td>
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<td>Mexican peso</td>
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<td>10.0</td>
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<td>1.7</td>
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<td>-1.0</td>
<td>-1.0</td>
<td>-0.7</td>
<td>-0.5</td>
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Nominal import and export growth

Percentage change of five year moving average

Exports
Imports

smdlimz  smdlexz
Current account deficit: soft landing

Billions of dollars

- Current account
- Net trade
- Net income
- Net transfer

curr_acct
net_trade
net_income
net_transfer
Industry employment shares: Productivity growth must come from all sectors
Reducing The Federal Deficit


- *Restoring America’s Future, Reviving the Economy, Cutting Spending and Debt, and Creating a Simple, Pro-Growth Tax System*, Bipartisan Policy Center (Rivlin-Domenici or RD).

- *Choosing the Nation’s Fiscal Future*, National Research Council and National Academy of Public Administration, January 2010 (NRC).

Reducing the Federal Deficit

Objectives and Method

- Stabilize debt/gdp (60% ?)
- Curtail discretionary spending growth, perhaps to level of inflation.
- Reform (reduce) entitlements.
- Comprehensive tax reform
- Cap expenditures/revenue at x% of GDP.
- Reform budget process.
Tax Reform: How can we tax labor and capital less and consumption more?

- Reduce/Eliminate tax expenditures, especially:
  1. Convert health care premium income exclusion to tax credit (voucher). (~$160 billion in FY2010)
  2. Phase out mortgage interest deduction (~$110 billion in 2010).

- Use proceeds to lower and flatten rates.
- Lower Corporate tax rates (phase out eventually)
- Unify rates across earned, dividends, capital.
- Higher energy taxes/Carbon tax
- National Sales (RD) or Value Added Tax.
Entitlement Reform: Social Security

- Increase cap on payroll taxes.
- Change COLA to better reflect inflation.
- Reduce benefits for richest, strengthen safety nets for poorest.
- Increase retirement age.
- Cover new S&L workers.
- Little sentiment for private retirement accounts.
Entitlement Reform: Medicare

- **Restrain Rising Health Care Costs**
  - Replace/cap employer-provided health benefits exclusion.
  - Reform medical malpractice laws.
  - Excise tax on corn syrup (RD).

- **Ryan-Rivlin plan for Medicare**
  - ST: More cost sharing by increasing premiums, copayments and coinsurance.
  - LT: “Premium Support” voucher system with catastrophic caps.

- **Cap Medicaid growth**
Worst idea of deficit reduction

• Establishing an arbitrary cap on expenditures and revenue (21% in NC).

• Health care will grow as proportion of economy. Federal share of health care will increase.

• Baumol’s Disease (Can it be cured?)

• Interest
Federal expenditures as percent of GDP

- CBO Alternative (no doc fix, less discretionary compression)
- Inforum
- CBO base
- NRC #1 (similar to NDC and RD deficit reduction exercises)

Legend:
- aexp_gdp
- bexp_gdp
- outbas
- outalt
Fed Medical Expenditures as Percent of GDP
Federal Revenue as Percent of GDP

- Inforum
- CBO base
- NRC #1
- CBO Alternative (Bush tax cuts)
CBO sees faster recovery in growth and unemployment
Federal Deficit as Percent of GDP

- adef_gdp
- bdef_gdp
- defbas
- defalt
Federal Debt as Percent of GDP

- CBO Alternative
- Inforum
- CBO base
- NRC #1

afdb_gdp  bfdb_gdp  debbas  debalt
The U.S. pays much more for Health Care…

Figure B-4: Relationship between national income per capita and health care spending, OECD Countries, 2007

Source: OECD Health Data 2009
But health outcomes are generally inferior.
“Business as usual” is not sustainable now.

U.S. Current Account Balance
percent of GDP

A business-as-usual scenario

A sustainable scenario