Fiscal Challenge 2017
Current Outlook

US Debt as a Percentage of GDP

Source: “The 2016 Long-Term Budget Outlook” provided by Congressional Budget Office
Economic Implications

Reduced national savings and income

Weakened response to domestic and international issues

Budget pressure due to higher interest costs

Heightened probability of a fiscal crisis

Sources: “The 2016 Long-Term Budget Outlook” provided by Congressional Budget Office, “Finding the Tipping Point: When Sovereign Debt Goes Bad”
Statement of Overarching Goals

Increasing debt

Mitigate/Cut government spending

Weak GDP growth

Foster growth

Fiscal stability

Strengthened output
Social Security: Status

Largest federal spending program

OASDI Trust Fund depleted in 2035

Only 77% of benefits will be paid

Federal Spending Components

- Social Security, Unemployment, and Labor: 36%
- Medicare and Health: 28%
- National Defense: 15%
- Net Interest: 6%
- Other: 7 others

Source: Social Security Administration, “A Summary of the 2016 Annual Reports”

Social Security: Cost of Living Adjustments

Resolve inaccuracies of the CPI-W by using the C-CPI-U

Cumulative reduction of outlays of $1.035 Trillion in 2046
Social Security: Normal Retirement Age

- Raise Normal Retirement Age two months per year for 6 years
- Supported in the past by Congress
- Adaptation to longer lifespans

Cumulative Reduction of outlays of $353.9 Billion by 2046.


Social Security: Raising the Taxable Maximum

- 76.9% of beneficiaries never affected under this option.
- Those required to contribute more of their income will receive higher benefits.
- Cumulative reduction in outlays of $1.33 Trillion by 2046

Change in Outlays

- Cumulative reduction in outlays of $1.33 Trillion by 2046
Tax Exclusion for Employee Sponsored Health Insurance: Status

The 10 Most Expensive Tax Deductions

- Employer Paid Health Insurance
- Lower Rate for Capital Gains, Dividends
- State and Local Tax Deductions
- Mortgage Interest Deduction
- Tax Free Medicare Benefits
- Workplace Retirement Saving Plan

Employer-sponsored health insurance premiums excluded from taxable income

$250 billion reduction in 2016

Cadillac Tax (2018)
Cut the tax exclusion for employee sponsored health insurance

 Politically feasible

 Neutralize and simplify the tax code
Tax Exclusion for Employee Sponsored Health Insurance: Benefits

Additional revenue amounting to $6.7 trillion (in 2009 USD)

Increased labor compensation

Reduced job lock
Unused Federal Land: Status

Government owns nearly half of all land in the west

Approximately 296.1 million acres of unused federal land

Various opportunities for land use

Source: Map from The Atlantic
Unused Federal Land: Net Effect

- 296.1 million acres
- $85.32 per acre
- Variable use

$758 billion cumulative reduction in deficit over 30 years

Shifts burden of land maintenance to lessees

Increases employment opportunities
Institute a tax of $20/metric ton of CO$_2$ emitted, decrease by 10% annually.

6,870 million metric tons of CO$_2$ emitted each year
Carbon Tax: Implementation

Differing qualities in each sector requires policy to vary depending on the subject of the tax.

**Individual**
- Yearly lump-sum tax per car
- Tiered tax system
- Lower rates for fuel efficient Vehicles

**Industry**
- Utilize spending reports to set tax
- Establish threshold to reduce burden on small business

**Energy**
- Follow CBO prescribed methods of taxing energy producers
  - **Petroleum**: Taxed at refinery
  - **Coal**: Taxed when mined
  - **Natural Gas**: Tax on extraction
Carbon Tax: Benefits

Tax revenue begins at $150 billion annually

Increased investing in new, clean energy sources: $30 billion federal investment annually

Revenue-neutral policy change to spark growth

Quell national carbon emissions: 20% reduction in carbon dioxide emissions by 2050
Cannabis: Legalization of Farming, Manufacture, and Use

Removal from Schedule I Drug Listing

License for cultivation, manufacture, and retail

Federal, State, and Local Taxes

21 years of age

Source: National Cannabis Industry Association website
Calculated according to information from the Marijuana Policy Group, the U.S. Bureau of Labor Statistics, and Census.gov.
Cannabis: Reduction in Fiscal Spending

- Expected Sales
- 15% Federal Tax
- 11,533 imprisoned annually
- $30,619.85 per prisoner

Direct federal spending reduced by $17.4 billion over 30 years

Mitigated Tangential Crime
The net effect: reduction of half a percent point from the Debt-to-GDP ratio each year. This is a compilation of prior estimates weighed against CBO projections.
Public Infrastructure: Federal Spending

Federal spending: $96 billion

State and local spending: $320 billion

68% of federal infrastructure spending towards capital, operations, and maintenance

Privatization would cut federal spending on maintenance in half

Sources: CBO, American Securitization Forum, American Action Forum, Gordon Graym Market Watch, Public Plans Data
Public Infrastructure: Pension Problem

- Decrease in risk-free rate of return
- Increased average lifespan
- Increase in unfunded liabilities for public pensions
- 7-8% no longer feasible without higher risk
- Defined benefit plans guaranteed by law

Asset Allocation for Public and Local Pension Funds (2015)

- Equities: 51.8%
- Bonds/Cash: 24%
- Alternatives: 16.4%
- Real Estate: 3%
- Other: 4%
Public Infrastructure: Securitization

- Federal Government
- Highways
- Airports
- Railways
- Special Purpose Vehicles (SPVs)
- Investment Banks
- Infrastructure ABS
- Institutional Clients

Source: American Securitization Forum
Public Infrastructure: Benefits

- Provides high-quality investment for Pension Funds
- Increased investment in transportation
- Federal infrastructure spending is reduced by 68% and budget is stimulated by underwriting infrastructure
- Incentive for travelers to reduce emissions
Net Effect and Conclusion

US Debt as a Percentage of GDP

Sources: NationalDebtClocks.org, “The 2016 Long-Term Budget Outlook” provided by Congressional Budget Office
Thank you for your time!
Tax Exclusion for Employee Sponsored Health Insurance: Status

- This tax deduction is the 3rd largest health program.
  - This exclusion is the largest tax expenditure.
- Nearly 155 million people are covered by employment-sponsored health insurance.
  - Average savings for tax filers with incomes <$30,000 is $1,650
  - Average savings for tax filers with incomes >$200,000 is $4,580
- Affordable Care Act: Left tax exclusion intact to avoid disrupting the program that a majority of non-elderly workers and their families participate in.
  - Cadillac Tax (2018): 40% tax on high-priced employer-sponsored health plans
  - High-Priced plans are defined by:
    - Individual coverage: > $10,200
    - Family coverage: > $27,500

Appendix
Tax Exclusion for Employee Sponsored Health Insurance: Implementation

- Historically, Republicans tend to favor limited government intervention.
  - Taking away this tax exclusion allows people more freedom in how they want to spend their income.
- Neutralize tax code:
  - Eliminates incentive to purchase health care in a certain manner
- Simplifies tax code:
  - No longer need to deduct the cost of health plans from income to calculate taxable income
Tax Exclusion for Employee Sponsored Health Insurance: Benefits

● Graph trendline equation:
  \[ y = -0.7756x + 1791.2 \]
  ○ Data extrapolated from 2017-2046 based on CBO data
  ○ Calculations made in 2009 USD

● Cadillac Tax will not be effective because employer are already changing coverage programs to avoid paying it.
  ○ Employers are lowering the expected future premium costs of any group plans they will continue to offer and finance.
Social Security: COLA Adjustments

- Data for projections is from the CBO report: “Options for Reducing the Deficit: 2015 to 2024.” Projections/data points are adjusted to 2009 dollars.
- Currently, Cost-of-living adjustments (COLAs) for Social Security and many other parameters of federal programs are indexed to increases in the CPI-W, a measurement published by the Bureau of Labor Statistics that measures price change for groups of urban wage earners and clerical workers only.
- Under our proposal, the federal government would use an alternative measurement for COLAs published by the Bureau of Labor Statistics--the Chained CPI, which would include all urban consumers.
- The main reasons for shifting away from the CPI-W are due to its inaccuracies.
  - The congressional research service has highlighted that the CPI-W may understate the average inflation experienced by older Americans, because they consume greater proportions of goods whose prices tend to rise more rapidly than the average market “basket,” including healthcare and housing.
  - Chained CPI-U covers a greater amount of the American Population than the CPI-W. (88% vs. 28%)
  - Unlike the CPI-W (and the traditional CPI-U), the Chained CPI-U fully accounts for substitution by consumers and eliminates small-sample bias.
- The Chained CPI has grown an average of about 0.25 percentage points more slowly per year over the past decade than the traditional CPI has
  - Congressional Budget Office expects that gap to persist.
- By 2046, the cumulative reduction of outlays by the federal government would be $1.035 Trillion.
  - Trendline equation: $y = -2.1192x + 4270.7$. This equation gives the reduction in outlays “$y$” for a specific year “$x$”.
- This is a conservative estimate, because it does not include savings that would come from other federal programs that factor in costs of living.
Data for projections is from the CBO report: “Options for Reducing the Deficit: 2015 to 2024.” Projections/data points are adjusted to 2009 dollars. Trendline equation: \( y = -0.7595x + 1531.1 \) This equation gives the reduction in outlays “\( y \)” for a specific year “\( x \)”.

Under our proposal, the full retirement age would increase to 67 more quickly and would then increase further. Specifically, the full retirement age would increase in two-month increments for six years.

- Workers could still choose to begin receiving reduced benefits at 62, but the reductions would be larger.
- The benefits for workers who qualify for disability insurance would not be reduced.

Because many workers retire at the full retirement age, increasing that age will result in beneficiaries’ remaining employed longer and claiming Social Security benefits later.

- The additional work would increase total output and boost federal revenues from income and payroll taxes.
Social Security: Raising the Taxable Maximum

- Data for projections is from the CBO report: “Options for Reducing the Deficit: 2014 to 2023.” Projections/data points are adjusted to 2009 dollars. Trendline equation: y= -0.0444x + 47.361. This equation gives the reduction in outlays “y” for a specific year “x”.
- This proposal would increase this maximum to 90%, and in later years the maximum would be adjusted as it is currently.
- Benefits to pursuing this option include the fact that 76.9% of current beneficiaries would never be affected by this option, because their annual income already falls below the taxable maximum.
  - Those that will be required to increase their contributions because of this tax will be compensated in the future with higher benefits.
- We expect that in 2046 the cumulative reduction of federal outlays for Social Security will be $1.33 Trillion.
- Will make the Social Security payroll tax less regressive.
  - Currently people with earnings above the ceiling now pay a smaller percentage of their total earnings in payroll taxes than do people whose total earnings are below the maximum.
  - Making more earnings taxable would increase payroll taxes for those high earners.
Public Infrastructure Value

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total value of all transportation infrastructure</td>
<td>$5.31 trillion</td>
</tr>
<tr>
<td>Total value of all State, Local, and Federal transportation infrastructure</td>
<td>$4.07 trillion</td>
</tr>
<tr>
<td>less: State and local</td>
<td></td>
</tr>
<tr>
<td>Value of Federal transportation infrastructure (2014)</td>
<td>$1.0175 trillion (in 2014 $)</td>
</tr>
<tr>
<td>Discounted back to 2009 using 1.02% interest rate factor to adjust for inflation</td>
<td></td>
</tr>
<tr>
<td>Total value of federal transportation infrastructure in 2009 dollars</td>
<td>$.922 trillion (in 2009 $)</td>
</tr>
</tbody>
</table>

Assumptions:
- 2% average annual inflation
- Federal government accounts for 25% of total value of State, Local, and Federal Transportation Infrastructure

Data based on information from the Bureau of Transportation Statistics and American Action Forum


Cannabis

- *Marijuana Policy Group’s* October 2016 report “The Economic Impact of Marijuana Legalization in Colorado”
  - Estimated cannabis sale multiplier: **2.4x**
  - Projected industry growth until 2020: **11.3%**
  - Projected industry growth 2020 and beyond: **2.0%**
  - Employment effects: **18,000 FTE** added in FY 2015 coinciding with nearly **$1 billion** of marijuana sales

- United States population projections come directly from the “2014 National Population Projections” provided by the *United States Census Bureau*
  - Sales and demand from Colorado were indexed to the Colorado population, extrapolated to the rest of the country (by population), and then projected growth and multipliers ensued

- Federal prisoners due to marijuana charges: **11,533 in retention** according to the *Bureau of Justice Statistics’* October 2015 report “Drug Offenders in Federal Prison: Estimates of Characteristics Based on Linked Data”

- Cost of federal prisoners: **$30,619.85** according to the *Federal Registers’* March 2015 report “Annual Determination of Average Cost of Incarceration”

- Tangential Crime: purchasing cannabis as a black market good (i.e., an illegal good) likely exposes consumers to a variety of contraband and puts them at a heightened risk of committing other crimes along with their purchase of cannabis. We reason that by turning it into a public market good, crime will be reduced more than the sole reduction in marijuana charges.

- Other industries will likely thrive once legalization takes effect. Colorado saw steady increases in tourism since 2012 according to *The Denver Post’s* yearly articles exhibiting the tourism industry. It is reasonable that a variety of sectors and industries would benefit from the legalization: food services, agriculture, retail and merchandising, etc.
Unused Federal Land

• 630 million total acres of federal land
  • Mostly in western US
  • Does not include much of California
  • 47% completely unoccupied
• .47 * 630,000,000 acres = 296.1 million acres of unoccupied land
• Unweighted average of cropland in western US (excluding California) = $2844 per acre

\[
PV\ of\ Perpetuity = \frac{D}{r}
\]

\[
PV = \text{Present Value}
\]
\[
D = \text{Dividend or Coupon per period}
\]
\[
r = \text{discount rate}
\]

• PV = 2844
• r = .03 (real interest)
• D = 85.32 (annual rental rate)

• $85.32 * 296,100,000 = $25,263,252,000 yearly revenue
• $25,263,252,000 * 30 = $757,897,560,000 cumulative impact
• Assumption - Firms will not rent land unless revenue >= rental rate (85.32)
  ○ Otherwise they operate at a loss
• Assumption - Land must currently be maintained. If owned by the government, then maintenance must be done by the government. Lease terms can shift this responsibility to lessees.
• Assumption - Lessees will employ labor; operations likely are not completely automated
Figures for Carbon Tax were calculated as follows

\[
\text{($150\text{Billion Annual Revenue}*-30\text{Billion Clean Energy Investment})(Annual 4\% \text{ Increase in Tax Level})}
\]

*Estimate Made by Brookings Metropolitan Policy Program
Federal Legalization of Cannabis: Sources

- [https://www.census.gov/population/projections/data/national/2014/summarytables.html](https://www.census.gov/population/projections/data/national/2014/summarytables.html)
- [http://thecannabisindustry.org/state-marijuana-policies-map/](http://thecannabisindustry.org/state-marijuana-policies-map/)
- [https://taxfoundation.org/taxing-marijuana-washington-and-colorado-experience/](https://taxfoundation.org/taxing-marijuana-washington-and-colorado-experience/)
Tax Exclusion for Employee Sponsored Health Insurance: Sources

- http://www.investopedia.com/articles/tax/10/nontaxable-invome-sources.asp#ixzz4WofvAE9B
- www.nytimes.com/roomfordebate/2015/04/14/the-worst-tax-breaks/end-the-exemption-for-employer-provided-health-care
Sources: Social Security

- https://www.ssa.gov/oact/trsum/
- https://www.cbo.gov/publication/52298
- https://www.ssa.gov/planners/maxtax.html
- https://www.ssa.gov/OACT/solvency/provisions_tr2005/wagebase.html
- https://www.ssa.gov/retirementpolicy/projections/taxation/90-percent-tax-max-include-2030.html
- https://www.cbo.gov/sites/default/files/51135-2016-08-EconomicProjections-2_0.xlsx
- https://data.bls.gov/pdq/SurveyOutputServlet
Carbon Tax: Sources

- https://www.carbontax.org/states/
- https://www.carbontax.org/dividends/
Public Infrastructure: Sources

- http://publicplansdata.org/quick-facts/national/
- http://www.marketwatch.com/story/these-3-charts-explain-the-terrifying-math-behind-pension-funds-shortfall-2016-08-31
- https://www.washingtonpost.com/blogs/ezra-klein/post/more-states-privatizing-their-infrastructure-are-they-making-a-mistake/2012/03/31/glQARtAhnS_blog.html?utm_term=.0f1854417247
- http://www.icbc.com.cn/ICBC/Corporate%20Banking/Financialmarket/ProductsServices/UnderwritingofAssetbackedNotes/
- https://www.cbo.gov/publication/50150
- https://www.cbo.gov/publication/45416
Public Infrastructure: Sources

- https://www.newyorkfed.org/medialibrary/media/research/epr/12v18n3/1210ashc.pdf
- https://www.downsizinggovernment.org/transportation/airports-atc
Federal Land: Sources