Spending Trajectory

- Interest Payments
- Shifting Demographics
- Rapid Health Care Cost Increase
- Inadequate Revenues

Sources: Peter G. Peterson Foundation, CRFB, CBO, Committee for Economic Development
Dangers of the Debt

92% of Americans agree that managing the debt will lead to a better future for the next generation.

- Slower Economic Growth
- Insolvent Entitlement Programs
- Fiscal Cliff
- Higher Interest Rates
- Crowding Out
- Lack of Fiscal Space

Sources: CRFB, The Manhattan Institute, Peter G. Peterson Foundation
Assumptions:

- No Wars
- No Recessions
- Low Interest Rates
- Tax Cuts Expire as Scheduled

Sources: Peter G. Peterson Foundation, CRFB, CBO, Committee for Economic Development
Goal

To Maintain U.S. Debt: GDP at 80% by 2050
Major Concerns

- Political Feasibility
- Rising Interest Rate Payments
- Distributional Outcomes
- Interaction Effects
Principles

- Gini Coefficient
- Pigouvian Tax
- Allocative Efficiency
- Productive Efficiency
- Strategic Efficiency
Agenda

**Taxes**
- Payroll Tax
- High Frequency Trading
- Legalization of Marijuana
- Carbon Tax
- Income Tax Reform

**Entitlement Programs**
- Entitlement Fraud
- Medicare-Medicaid Plan

**Discretionary Spending**
- Education Reform
- Defense Reform
- Infrastructure Spending

**Summary**
- Interaction Effects
- Before & After
- Impact Summary
Taxes
Proposal: Eliminate the Social Security Payroll Cap

- Reduces overall tax burden on lower and middle income
- Makes Social Security solvent until 2065
- Increases revenue $19.5 Trillion by 2050

Sources: The Heritage Foundation, CRFB, SSA, CBPP
Latency Arbitrage

Proposal: Tax the Practice of High Frequency Trading (HFT)

- Disincentivizes HFT, allowing for more competitive bidding
- HFT creates a $2.77 Billion inefficiency on U.S. markets annually
- Increases revenue $11.4 Trillion by 2050

Estimated Trader Revenue from U.S. Latency Arbitrage (2019)

- NYSE $1 Billion
- NASDAQ $862 Million
- CBOE $910 Million

Marijuana

Proposal: Legalize Marijuana and Implement a Federal Tax of $50 per Ounce

- Use as a substitute for addictive painkillers reduces the opioid-related mortality rate by 24.8%
- Saves Medicare Part D over $470 Million annually
- Increases revenue $7.5 Trillion by 2050

Legalization Status in the U.S. (2019)

Sources: IOTAEP, Tax Foundation, Health Economics, Michael Amlung, National Public Radio
Carbon Tax

Proposal: Combine a Carbon Tax with Privatization of U.S. Dams

- $15 per metric ton, increasing $10 annually until 2050
- Dividend distribution offsets regressivity
- Increase hydroelectric power from 9% to 15%
- Increases revenue $5.6 Trillion by 2050

Sources: US Army Corp of Engineers, Energy Innovation Act, Tax Foundation, FEMA, Grantham Research Institute on Climate Change, IMF, Science Direct
Income Tax

Proposal: Reform the Income Tax and Increase Enforcement Funding of the IRS

- Raise rate 3% for two upper brackets
- Repeal Mortgage Interest Deductions and exclude Itemized Deductions under 3-5% of AGI
- Increases revenue $3.1 Trillion by 2050

<table>
<thead>
<tr>
<th>Income</th>
<th>Itemized Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;250,000</td>
<td>3% of AGI</td>
</tr>
<tr>
<td>250,000-1million</td>
<td>4% of AGI</td>
</tr>
<tr>
<td>&lt;1million</td>
<td>5% of AGI</td>
</tr>
</tbody>
</table>

Sources: Institution on Taxation and Policy, Bill Emmons from American Economic Review, WSJ, FRBSL
Tax Effect on Debt: GDP

Debt to GDP Reduction From Tax Proposals

- 180%
- 149%
- 128%
- 113%
- 101%
- 94%

CBO, Payroll Tax, HFT, Marijuana, Carbon Tax, Income Tax
Entitlements
Entitlement Fraud
Proposal: Implement a Predictive Model to Detect Medicare & Social Security Fraud Along with Reducing Improper Payments

- Success rate of detection is 70% and improves over time
- Saves $71 Billion annually from fraud and government error
- Decrease spending $3 Trillion by 2050

Entitlement Fraud (Billions)

Sources: Health Management Policy & Innovation, Health IT Outcomes, OMB, AARP, GAO
Medicaid-Medicare Plan

Proposal: Implement a National Medicare-Medicaid Plan for Dual-Eligibles

- Incentivize insurers to coordinate long term care, reducing health care costs
- Correcting productive inefficiencies by reducing routine cost shifting
- Decrease spending $1.5 Trillion by 2050

MMP Financial Model

Private Insurer
Administrative Vehicle

Federal
75%

State
25%

MMP 88% 6%

Sources: Dr. Kenneth Thorpe (2011), Cicero Institute, MedPac, Department of Health and Human Services
Entitlement Reform Effect on Debt: GDP

Debt to GDP Reduction From Entitlement Proposals

- 180%
- 172%
- 166%

Years: 2020, 2023, 2026, 2029, 2032, 2035, 2038, 2041, 2044, 2047, 2050

- CBO
- Entitlement Fraud
- MMP
Discretionary Spending
Education

Proposal: Increase Perkins V Funding by $10 Billion Annually

• Provide access to vocational programs in secondary schools
• Increases GDP by $426 Billion over the next 30 years
• Increase revenue $3.5 Trillion by 2050 through additional income tax

Curriculum of Perkins V

12 Advanced Placement Prep Classes
14 World Languages
30+ College and Career Readiness
100+ Electives
100+ Core Curriculum
100+ Career and Technical Education

Sources: Upjohn Institute for Employment Research, National Research Center for Career and Technical Education, NCES
Defense

Proposal: Implement Performance Based Logistics, O&M Reform, Replacing Military Positions with Civilian Personnel

- Maintain fighting strength and capabilities
- Create a more efficient tooth to tail ratio
- Break the death spiral
- Decrease spending $3.48 Trillion by 2050

Sources: Hoover Institution, Heritage Foundation, RAND
Job Infrastructure

Proposal: $500 Billion in Government Spending to Shovel Ready Projects

- $350 Billion for transportation and mass transit projects
- $75 Billion for water projects
- $75 Billion for modernization of federal buildings
- Creates 10 million jobs in 3 years

Sources: Political Economy Research Institute, Amherst (2011), American Reinvestment and Recovery Act
Discretionary Effect on Debt: GDP

Debt to GDP Reduction From Discretionary Proposals

- CBO
- Education
- Defense
Interaction Effects

Taxes
- High Frequency Trading
- Income Tax
- Carbon Tax

Payroll Tax

PPI
Medicare Fraud
Medicare-Medicaid Plan

Health Care

Perkins V
Marijuana

Productivity

Infrastructure Spending
Performance Based Logistics

25
Before & After

Net Debt to GDP Reduction

- CBO
- TAXES
- ENTITLEMENTS
- DISCRETIONARY

[Graph showing net debt to GDP reduction over time with percentage values for each year from 2020 to 2050.]
<table>
<thead>
<tr>
<th>Effect of Proposals</th>
<th>Component</th>
<th>Principles</th>
<th>Debt:GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax</td>
<td>Payroll Tax</td>
<td>Gini Coefficient Strategic Efficiency</td>
<td>-30.87%</td>
</tr>
<tr>
<td>Tax</td>
<td>High Frequency Trading</td>
<td>Allocative Efficiency</td>
<td>-20.71%</td>
</tr>
</tbody>
</table>
| Tax                 | Marijuana                  | Pigouvi

ante Tax | -14.77% |
| Tax                 | Carbon Tax                 | Pigouvi

ante Tax Strategic Efficiency | -11.82% |
| Tax                 | Income Tax                 | Gini Coefficient Strategic Efficiency | -8.07%    |
| Entitlements        | Entitlement Fraud          | Allocative Efficiency       | -8.00%    |
| Entitlements        | Medicare-Medicaid Plan     | Productive Efficiency       | -5.59%    |
| Discretionary       | Education                  | Gini Coefficient Productive Efficiency | -8.69%    |
| Discretionary       | Defense                    | Allocative Efficiency       | -8.61%    |
| Discretionary       | Infrastructure             | Strategic Efficiency        | +2.24%    |
| **Total**           |                            |                             | **65.10%** |
Thank you!

Team 128
Latency Arbitrage:
• HFT engages in "cream skimming" the market by processing incoming buy/sell orders in fractions of a second, and immediately place orders that exploit the observed trend patterns, at the expense of individuals and other firms in the market that cannot compete with this level of computational power (Institute on Taxation and Economic Policy).
• High frequency trading was responsible for a “flash crash” in the market that dropped the Dow Jones by 10 percent in minutes. The SEC traced the event to a single massive trade that triggered a ripple effect of algorithms conducting massive transactions in succession of the prior. (Bloomberg)
• A Financial Transaction Tax would not create a burden on middle to lower income families/individual traders within the market due to stocks being disproportionately owned by upper income individuals. In 2016, the wealthiest 10 percent of Americans owned 84 percent of stocks in the market. (Institute of Taxation and Economic Policy)

Marijuana:
• Over 91 percent of U.S. adults say marijuana should be legalized for either medical or recreational use. (Pew Research Center, 2019)
• Over 73 percent of medical marijuana patients in the U.S. used cannabis “as a substitute or alternative to other medicines” (New Frontier Data)
• In states that introduced the use and sale, the presence of legal and regulated marijuana increased price sensitivity for illegal cannabis by 68 percent... For every dollar consumers/patients spend at dispensaries, an additional 2.50$ of economic value will be injected into the economy” (Michael Amlung, Peter Boris Center)
• Over 1 million patients in the US with conditions like Alzheimer's, HIV/AIDS, Parkinson's, and MS could benefit from access to marijuana as a substitute for other painkillers. “If just 10% of the world’s population suffering from these ailments began to use cannabis therapeutically, it would create a market of over 100 million patients” (New Frontier Data)

Carbon:
• “Carbon Tax of $15 per metric ton of carbon dioxide, starting in 2020 will increase $10 per year.” - Congress (HR 763)
• “Currently, only 10% of dams are producing hydroelectric power. By privatizing, the US will be able to produce a greener electrical grid and cause hydroelectric energy to increase from 9% to 15%.” (FEMA)
• “In addition, the Army Corps of Engineers will save $800 million from privatization that can be spent on infrastructure.” (Army Corps of Engineers)
Income Tax:
• “For the first time on record, the 400 wealthiest Americans last year paid a lower total tax rate than any other income group, according to newly released data.” (Wall Street Journal)
• “7% of MID benefits go to the middle 20% of households” (Brookings Institution)
• “MID drove down homeownership by 5% in 2018” (Bill Emmons, American Economic Review)
• “We’ve found no convincing evidence that raising taxes at the levels that policymakers are considering would negatively affect high-income people’s reporting of taxable income, the amount they work, their saving and investment, the health of small businesses, or the rate of entrepreneurship” (Center for Budget and Policy Priorities Center)
• “Analyses claiming that taxes on millionaires and billionaires will slow economic growth are fundamentally flawed.” (Economics Policy Institute)
• “By driving up housing costs, the mortgage interest deduction reduced homeownership rates by 5% in 2018” Bill Emmons in the American Economic Review

IRS:
• “The IRS’s shrunken budget and depleted workforce magnify the challenge. Policymakers cut its budget by $2.4 billion, or 18 percent, between 2010 and 2017” (Center on Budget and Policy Priorities)
• The amount of unpaid taxes every year is about three-quarters the size of the entire annual federal budget deficit. Brookings
• “As of last year, the IRS had 9,510 auditors. That’s down a third from 2010. The last time the IRS had fewer than 10,000 revenue agents was 1953, when the economy was a seventh of its current size.” (Propublica)
Appendix

Wasteful Entitlement:
• Improper payments are defined as “payments made by the government to the wrong person, in the wrong amount, or for the wrong reason.” and fraud is defined as knowingly using deception for financial gain. (Social Security Administration)
• It is estimated that $60 Billion dollars a year is lost to Medicare Fraud alone (US Government Accountability Office)
• About $7 Billion was lost to wasteful spending in Social Security in the year 2017. (Office of Management and Budget)
• Since 2004, twenty large federal agencies admit to paying out an astonishing $1.2 trillion in improper payments across several government departments such as Social Security, Medicare, Pell Grants and the DOD, to name a few. (Congressional Research Service)

Career and Technical Education:
• The Budget includes a substantial increase for Career and Technical Education of nearly $900 million to strengthen America’s workforce by providing access to high-quality vocational programs in every high school. (The White House Budget for 2020)
• Graduation rate for CTE is 95%. (CTE)
• A study in Arkansas found that students with greater exposure to CTE are more likely to graduate from high school, enroll in two-year college, be employed, and earn higher wages. (CTE)

MMP:
• “Massachusetts MMP: 82% of enrollees were satisfied with program. 7.5% less hospital admissions. 6.4% fewer emergency department visits.” (Commonwealth Care Alliance)
• “Dual eligibles collectively costs: $350-400 billion(Department of Health and Human Services) 12 million x $34,000”
• “39% of dual eligible hospitalizations are preventable.” (Journal of the American Geriatric Society)
• “(MMP)Three- way contracts were preferred by every stakeholder.” (MedPac study conducted in 2018)
• “Total Savings= 50 Billion * .75(Federal Government= Total Federal Government Savings” (Cicero Institute)
Appendix

Performance Based Logistics

- Performance-Based Logistics is an arrangement in which the contractor is responsible for a larger portion of the support throughout the life cycle of the product. Thus, instead of being associated with the delivery of a platform, a contract is associated with the proper functioning of that platform. (The Heritage Foundation)

- The 1998 U.S. Secretary of Defense, Jacques Gansler describes this as a “cycle where aging weapons and inefficiencies divert defense dollars from procurement to maintenance accounts.”

Operations and Maintenance Budget Reform

- O&M accounted for nearly 40 percent of DoD’s request for base-budget funding in 2019, making it the largest single appropriation title in DoD’s budget. DoD’s base-budget costs for O&M grew by about 45 percent from 2000 to 2018, despite a 4 percent decrease in the size of the military. (Congressional Budget Office)

- This would reduce the discretionary budget authority provided for O&M by $220 billion over 10 years. (Congressional Budget Office)

Replacing Some Military Personnel With Civilian Employees

- A DoD civilian in a commercial position costs the federal government 30 percent less in total, on an annualized basis, than a military service member in a similar position. (Congressional Budget Office)

- The full cost to the government of a General Schedule-14 (GS-14) civilian would be about 25 percent lower than that of an O-5 Army officer (lieutenant colonel), and 10 to 25 percent lower than that of a private contractor. (DoD 7041.04)

- Military personnel tend to vacate their positions more frequently than civilian personnel do. Civilians are therefore able to gain more experience, develop deeper subject knowledge, and provide greater continuity. As a result, fewer civilians are required to achieve a given level of readiness, and fewer civilian accessions are needed to sustain a civilian force of a given size. (RAND 2016)

Areas of implementation:


- PBL arrangements reduce the Services’ cost per unit-of-performance while simultaneously driving up system, subsystem, or component readiness. The study further estimated that an average annual cost savings or avoidance of 5-20 percent is possible for programs with generally sound adherence to the PBL tenets. (US Department of Defense, Logistics and Material Readiness 2016)