



Revenue Estimation & Tax Research Conference

Experience Estimating the Revenue Impact of TCJA – a Microsimulation Modeling Approach

Chainbridge Software, LLC

October 9, 2018



Background -- Chainbridge

- Has been developing and delivering tax policy analysis tools for state government clients for nearly two decades
- Eric Cook, PhD, revenue estimator at the US Congressional Joint Committee on Taxation during federal tax reform efforts leading to the Tax Reform Act of 1986
- Directed development of tax modeling projects for state government clients (Price Waterhouse and KPMG), left KPMG to form Chainbridge in 2000



Background -- recent events

- Early in 2018, two states contracted with Chainbridge to assist in their analysis of the TCJA
- Two microsimulation models developed (individual income tax and corporate income tax) for and delivered to the two states
- Impacts of the (1) individual, (2) business, and (3) international provisions of the TCJA on the these two states were estimated and reports developed



The Chainbridge team

- Eric Cook, PhD, CEO
- Nancy Cook, President
- Kirk Copen, VP Software Development
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- Stephen Woerner, Software Engineer



Overall approach

- Construct two microsimulation models (individual income tax and corporate income tax)
- For each provision within each provision type (individual, business or international):
 - Determine what the likely impact that the provision has on the state
 - Determine whether an on-model (using the microsimulation models) or off-model approach would be employed
 - Generate the revenue estimates and prepare a report presenting the results



Why microsimulation modeling?

- The “Gold Standard” for modeling tax policy changes
- Accurate method for assessing the impact by simulating a policy change for each taxpayer and aggregating results
- Forecasting and data extrapolation allows policy analysis to be conducted at future year levels



Estimating the impact of the TCJA using microsimulation models

- International provisions
- Individual provisions
- Business provisions



Significant international provisions

- Deduction for dividends received by domestic corporations from certain foreign corporations (DRD provision)
- Treatment of deferred foreign income upon transition to participation exemption system of taxation (Repatriation provision)
- Taxation of global intangible low-taxed income (GILTI provision)
- Deduction for foreign-derived intangible income derived from trade or business within the US (FDII provision)



Estimating approach – international provisions

- Corporate income tax model
- Augmented with data from Standard and Poor's *Compustat* database
- Review of Forms 10-K filed with the SEC
- Individual income tax portion of Repatriation provision – off-model approach



Significant individual provisions

- Standard deduction modification
- Loss limitation for noncorporate taxpayers
- Changes in itemized deductions:
 - Repeal of certain itemized deductions (state and local taxes, non-disaster casualty losses, some miscellaneous)
 - Limitation on mortgage interest deduction

Estimating approach – individual income tax provisions

- Individual Income Tax Model employed for the majority of the provisions as a percentage of the net revenue impact
- Database includes State returns matched with federal returns for residents
- Allows for tax to be recalculated using federal data and federal law (indexing provisions)
- Extrapolation of microdatabase to future years



Estimating issues – individual income tax provisions

- “Stacking order”
- Impact of the standard deduction modification – “switching” issue
- Extrapolation issue – federal Earned Income Tax Credit (EITC)



Significant business provisions

- Limitation on the net interest deduction
- Amortization of research and experimental expenses
- Repeal of the domestic production activities deduction
- Modification of the net operating loss (NOL) deduction
- Increase in IRC section 179 expensing
- Simplified accounting for small business



Estimating approach – business provisions

- Corporate Income Tax Model employed for the majority of the provisions as a percentage of the net revenue impact
- Population of state corporate income tax returns
- Matched with pro-forma federal Forms 1120
- Extrapolation of microdatabase to future years



Estimating issues – business provisions

- Affect both corporations and pass-through entities – split between corporate and individual

| Provision | Corporate Share (percent) | Individual Share (percent) |
|---|---------------------------|----------------------------|
| Bonus Depreciation | 70 | 30 |
| Section 179 Expensing | 10 | 90 |
| Net Interest Deduction | 95 | 5 |
| Small Business Accounting Changes | 30 | 70 |
| Modifications to NOLs | 90 | 10 |
| Amortization of R&D | 75 | 25 |
| Repeal Domestic Production Activities Deduction | 75 | 25 |

Source: US Congress, Joint Committee on Taxation



**Thank you and please feel free to
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Appendix: PolicyLinks Screenshots and Output Tables



Chainbridge

Individual Income Tax Model

Policy Simulation Report Selected Model: Individual Income Tax Model

Policy Creator

File Tools Help

- [-] A Tax Policy Example
 - [-] Income and Adjustments
 - Wages
 - Interest and Dividend Income
 - [-] Other Income Part I
 - Alimony Received
 - Business Income or Loss
 - Bonus Depreciation -Business
 - Gain or Loss from Sales of Real Estate
 - Taxable IRA Distributions
 - Taxable Pensions and Annuities**
 - Rents, Royalties, Trusts, etc
 - Farm Income or Loss
 - Bonus Depreciation -Farm
 - Other Income
 - Total Other Income
 - Total Income
 - [+] Adjustments to Income
 - Total Adjustments
 - Adjusted Gross Income
 - Alabama AGI
 - Apportioned AGI
 - [+] Deductions
 - [+] Tax

| Operation | Operand |
|----------------------------------|---------------------------------------|
| Taxable Pensions and Annuities = | Taxable pensions and annuities |
| + | |

Database Variables | User Defined Variables | Calculator Tools | Brackets | Conditions

State Tax Data

Variable List

- [-] Individual Income Tax Data
 - [-] Form 40
 - [-] Income and Adjustments
 - AL tax withheld wages 1
 - AL tax withheld wages 2
 - AL tax withheld wages 3
 - AL tax withheld wages 4
 - AL total tax withheld
 - Salaries and wages 1
 - Salaries and wages 2
 - Salaries and wages 3
 - Salaries and wages 4
 - Total wages
 - [+] Interest and dividend income
 - [+] Part I -- Other income
 - Other income (front of form)
 - Total income (front of form)
 - [+] Part II -- Adjustments to income
 - Total adjustments (front of form)
 - Adjusted gross income (front of form)

Tax Summary

Project Description:
 Base Policy Description: Default Policy 2010
 Alternative Policy Description: Default Policy 2010 Test for fta
 Unit of Analysis: Returns
 Filing Status Coverage: All
 Tax Year: 2012
 Classifier: AGI
 Economic Forecast: EconDefault
 Effective Tax Rate: Tax/Classifier
 Resident Coverage: Residents

| AGI Dollars | Number of Returns | | Taxable Returns | | | AGI | | | Taxable Income | | | |
|---------------|-------------------|-------------------|-------------------|--------------------|---------------|----------------------|------------------------|-------------------|----------------------|------------------------|-------------------|--------------|
| | Sample (Units) | Aggregate (Units) | Base Plan (000s) | Alternative (000s) | Change (000s) | Base Plan (Millions) | Alternative (Millions) | Change (Millions) | Base Plan (Millions) | Alternative (Millions) | Change (Millions) | |
| -infinity | 25000 | 295,583 | 299,507 | 161.26 | 148.65 | -12.62 | 2,793.47 | 2,793.47 | 0.00 | 1,199.94 | 1,062.48 | -137.47 |
| 25001 | 50000 | 135,788 | 137,590 | 130.41 | 130.39 | -0.03 | 4,949.26 | 4,949.26 | 0.00 | 3,003.88 | 2,945.27 | -58.60 |
| 50001 | 75000 | 70,718 | 71,657 | 69.37 | 69.37 | -0.00 | 4,392.47 | 4,392.47 | 0.00 | 2,760.25 | 2,749.30 | -10.96 |
| 75001 | 100000 | 40,345 | 40,881 | 39.93 | 39.93 | 0.00 | 3,533.04 | 3,533.04 | 0.00 | 2,296.22 | 2,293.31 | -2.91 |
| 100001 | 125000 | 24,288 | 24,610 | 24.20 | 24.20 | 0.00 | 2,742.57 | 2,742.57 | 0.00 | 1,837.52 | 1,842.05 | 4.53 |
| 125001 | 150000 | 14,807 | 15,004 | 14.81 | 14.82 | 0.01 | 2,046.42 | 2,046.42 | 0.00 | 1,393.49 | 1,402.34 | 8.85 |
| 150001 | 175000 | 8,924 | 9,042 | 8.93 | 8.93 | 0.00 | 1,460.18 | 1,460.18 | 0.00 | 998.59 | 1,005.30 | 6.71 |
| 175001 | 200000 | 5,407 | 5,479 | 5.40 | 5.40 | 0.00 | 1,023.18 | 1,023.18 | 0.00 | 697.24 | 701.01 | 3.77 |
| 200001 | 250000 | 5,948 | 6,027 | 5.95 | 5.96 | 0.01 | 1,335.53 | 1,335.53 | 0.00 | 904.29 | 936.38 | 32.09 |
| 250001 | 500000 | 6,663 | 6,751 | 6.66 | 6.67 | 0.02 | 2,231.50 | 2,231.50 | 0.00 | 1,459.15 | 1,558.63 | 99.48 |
| 500001 | 1000000 | 1,907 | 1,932 | 1.90 | 1.90 | 0.01 | 1,305.46 | 1,305.46 | 0.00 | 836.31 | 877.56 | 41.26 |
| 1000001 | infinity | 800 | 811 | 0.78 | 0.78 | 0.00 | 2,168.31 | 2,168.31 | 0.00 | 1,413.00 | 1,443.33 | 30.33 |
| Totals | | 611,178.00 | 619,290.97 | 469.60 | 457.00 | -12.60 | 29,981.38 | 29,981.38 | 0.00 | 18,799.88 | 18,816.95 | 17.07 |

| AGI Dollars | Tax | | | Distribution | | | Effective Tax Rate | | | |
|-------------|----------------------|------------------------|-------------------|---------------|-----------------|------------|--------------------|-----------------|------------|--------|
| | Base Plan (Millions) | Alternative (Millions) | Change (Millions) | Base Plan (%) | Alternative (%) | Change (%) | Base Plan (%) | Alternative (%) | Change (%) | |
| -infinity | 25000 | 53.03 | 46.75 | -6.28 | 5.92% | 5.21% | -0.71% | 1.90% | 1.67% | -0.22% |
| 25001 | 50000 | 141.26 | 138.34 | -2.92 | 15.77% | 15.42% | -0.35% | 2.85% | 2.80% | -0.06% |
| 50001 | 75000 | 131.31 | 130.77 | -0.55 | 14.66% | 14.57% | -0.08% | 2.99% | 2.98% | -0.01% |
| 75001 | 100000 | 109.99 | 109.84 | -0.15 | 12.28% | 12.24% | -0.03% | 3.11% | 3.11% | -0.00% |
| 100001 | 125000 | 88.30 | 88.53 | 0.22 | 9.86% | 9.87% | 0.01% | 3.22% | 3.23% | 0.01% |
| 125001 | 150000 | 67.30 | 67.74 | 0.44 | 7.51% | 7.55% | 0.04% | 3.29% | 3.31% | 0.02% |
| 150001 | 175000 | 48.40 | 48.73 | 0.33 | 5.40% | 5.43% | 0.03% | 3.31% | 3.34% | 0.02% |
| 175001 | 200000 | 33.85 | 34.04 | 0.19 | 3.78% | 3.79% | 0.02% | 3.31% | 3.33% | 0.02% |
| 200001 | 250000 | 43.98 | 45.57 | 1.59 | 4.91% | 5.08% | 0.17% | 3.29% | 3.41% | 0.12% |
| 250001 | 500000 | 71.11 | 76.05 | 4.94 | 7.94% | 8.48% | 0.54% | 3.19% | 3.41% | 0.22% |
| 500001 | 1000000 | 40.76 | 42.80 | 2.04 | 4.55% | 4.77% | 0.22% | 3.12% | 3.28% | 0.16% |
| 1000001 | infinity | 66.59 | 68.08 | 1.49 | 7.43% | 7.59% | 0.15% | 3.07% | 3.14% | 0.07% |



Winners and Losers

Project Description:

Base Policy Description: Default Policy 2010

Alternative Policy Description: Default Policy 2010 Test for fta

Unit of Analysis: Returns

Filing Status Coverage: All

Tax Year: 2012

Classifier: AGI

Economic Forecast: EconDefault

Resident Coverage: Residents

| AGI (Dollars) | Returns with a Tax Decrease | | | Returns with a Tax Increase | | | Total Tax Change | | | |
|------------------|---------------------------------|--|----------------|---------------------------------|--|----------------|---------------------------------|--|----------------|----------------|
| | Number of Returns (Units) | Amount of Tax Decrease (Millions) | Average (S) | Number of Returns (Units) | Amount of Tax Increase (Millions) | Average (S) | Number of Returns (Units) | Amount of Tax Change (Millions) | Average (S) | Percent (%) |
| -infinity 25000 | 132,502.84 | -6.28 | -47.40 | 0.00 | 0.00 | 0.00 | 132,502.84 | -6.28 | -47.40 | -462.51% |
| 25001 50000 | 47,876.20 | -2.92 | -60.97 | 0.00 | 0.00 | 0.00 | 47,876.20 | -2.92 | -60.97 | -214.95% |
| 50001 75000 | 8,540.89 | -0.55 | -64.02 | 0.00 | 0.00 | 0.00 | 8,540.89 | -0.55 | -64.02 | -40.27% |
| 75001 100000 | 2,306.21 | -0.15 | -62.93 | 0.00 | 0.00 | 0.00 | 2,306.21 | -0.15 | -62.93 | -10.69% |
| 100001 125000 | 818.73 | -0.05 | -62.09 | 2,911.14 | 0.28 | 94.52 | 3,729.86 | 0.22 | 60.14 | 16.52% |
| 125001 150000 | 320.19 | -0.02 | -68.63 | 1,321.31 | 0.46 | 350.26 | 1,641.50 | 0.44 | 268.55 | 32.46% |
| 150001 175000 | 158.07 | -0.01 | -73.42 | 693.08 | 0.35 | 498.70 | 851.15 | 0.33 | 392.45 | 24.60% |
| 175001 200000 | 109.43 | -0.01 | -75.69 | 331.34 | 0.20 | 590.23 | 440.77 | 0.19 | 424.90 | 13.79% |
| 200001 250000 | 114.50 | -0.01 | -70.94 | 5,056.24 | 1.60 | 316.76 | 5,170.74 | 1.59 | 308.17 | 117.35% |
| 250001 500000 | 123.62 | -0.01 | -73.28 | 5,540.58 | 4.94 | 892.40 | 5,664.20 | 4.94 | 871.32 | 363.45% |
| 500001 1000000 | 16.21 | -0.00 | -67.74 | 1,516.87 | 2.04 | 1,347.12 | 1,533.08 | 2.04 | 1,332.16 | 150.40% |
| 1000001 infinity | 8.11 | -0.00 | -57.39 | 574.53 | 1.49 | 2,597.07 | 582.63 | 1.49 | 2,560.14 | 109.85% |
| Totals | 192,895.00 | -10.00 | -51.86 | 17,945.09 | 11.36 | 633.08 | 210,840.09 | 1.36 | 6.44 | 100.00% |

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Date Created Wed Oct 02 15:40:53 EDT 2013

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Diagnostic Table

Project Description:

Base Policy Description: Default Policy 2010

Alternative Policy Description: Default Policy 2010 Test for fta

Resident Coverage: All (Residents and Non-Residents)

Tax Year: 2012

Economic Forecast: EconDefault

| Variable | Baseline Policy | | Alternative Policy | | Policy Differences | |
|---|--------------------------|-------------------------|--------------------------|-------------------------|--------------------------|----------------------------|
| | Number of Returns (000s) | Aggregate Totals (000s) | Number of Returns (000s) | Aggregate Totals (000s) | Change in Returns (000s) | Change in Aggregate (000s) |
| Wages_4 | 528 | 27,224,793 | 528 | 27,224,793 | 0 | 0 |
| Interest_and_Dividend_Income_5 | 97 | 2,547,809 | 97 | 2,547,809 | 0 | 0 |
| Alimony_Received_9 | 2 | 32,939 | 2 | 32,939 | 0 | 0 |
| Business_Income_or_Loss_10 | 102 | -1,952,866 | 102 | -1,952,866 | 0 | 0 |
| Bonus_Depreciation_Business_11 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gain_or_Loss_from_Sales_of_Real_Estate_1 | 58 | 494,615 | 58 | 494,615 | 0 | 0 |
| Taxable_IRA_Distributions_13 | 44 | 633,742 | 44 | 633,742 | 0 | 0 |
| Taxable_Pensions_and_Annuities_14 | 59 | 821,257 | 59 | 821,257 | 0 | 0 |
| Rents_Royalties_Trusts_etc_15 | 72 | 11,977,719 | 72 | 11,977,719 | 0 | 0 |
| Farm_Income_or_Loss_16 | 17 | -277,183 | 17 | -277,183 | 0 | 0 |
| Bonus_Depreciation_Farm_17 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other_Income_18 | 58 | 3,082,963 | 58 | 3,082,963 | 0 | 0 |
| Total_Other_Income_19 | 267 | 14,813,186 | 267 | 14,813,186 | 0 | 0 |
| Total_Income_20 | 609 | 44,585,789 | 609 | 44,585,789 | 0 | 0 |
| Primary_IRA_Deduction_22 | 9 | 51,975 | 9 | 51,975 | 0 | 0 |
| Spouse_s_IRA_Deduction_23 | 4 | 16,481 | 4 | 16,481 | 0 | 0 |
| Payments_to_KEOGH_24 | 2 | 45,091 | 2 | 45,091 | 0 | 0 |
| Penalty_on_Early_Withdrawal_of_Savings_2 | 5 | 1,229 | 5 | 1,229 | 0 | 0 |
| Alimony_Paid_26 | 3 | 45,517 | 3 | 45,517 | 0 | 0 |
| Adoption_Expenses_27 | 0 | 1,010 | 0 | 1,010 | 0 | 0 |
| Moving_Expenses_28 | 3 | 8,465 | 3 | 8,465 | 0 | 0 |
| Self_Employed_Health_Ins_Deduction_29 | 16 | 103,789 | 16 | 103,789 | 0 | 0 |
| Payments_to_AL_PACT_30 | 2 | 5,998 | 2 | 5,998 | 0 | 0 |
| Total_Adjustments_31 | 38 | 279,555 | 38 | 279,555 | 0 | 0 |
| Total_Adjustments_33 | 38 | 279,555 | 38 | 279,555 | 0 | 0 |
| Adjusted_Gross_Income_32 | 610 | 44,306,234 | 610 | 44,306,234 | 0 | 0 |
| AGI_106 | 610 | 44,306,234 | 610 | 44,306,234 | 0 | 0 |
| Apportioned_AGI_109 | 606 | 29,981,382 | 606 | 29,981,382 | 0 | 0 |
| Medical_and_Dental_Expenses_37 | 165 | 850,870 | 165 | 850,870 | 0 | 0 |
| AGI_Threshold_38 | 599 | 1,809,855 | 599 | 1,809,855 | 0 | 0 |
| Excess_of_Medical_Expenses_over_AGI_Limit | 605 | -958,985 | 605 | -958,985 | 0 | 0 |
| Max_Excess_Medical_Expenses_at_Zero_40 | 112 | 584,853 | 112 | 584,853 | 0 | 0 |
| Total_of_Taxes_Paid_42 | 372 | 2,286,215 | 372 | 2,286,215 | 0 | 0 |
| Social_Security_Tax_110 | 528 | 1,669,533 | 528 | 1,669,533 | 0 | 0 |
| Medicare_Tax_111 | 528 | 394,759 | 528 | 394,759 | 0 | 0 |



Property Tax Model

Policy Simulation Report Incidence Economic Manager Selected Model: Property Tax Model

Policy Creator - C:\PolicyLinks\Alabama Tax Models\Project Files\BHines\Property\Policy\Default All Property Tax 2014 with other.pol

File Tools Help

- [-] Default All Property Tax 2014 with other
 - [+] Real Property
 - [-] Personal Business Property
 - Total Appraised Personal Property
 - Database Assessed Personal Proper
 - Personal Property Assessment Rate
 - Assessed Personal Property
 - [-] Parameters
 - Exemption Code
 - State Mill Rate
 - County No School Mill Rate
 - County School Mill Rate
 - City No School Mill Rate
 - City School Mill Rate
 - Initial Special Mill Rate
 - Final Special Mill Rate
 - Total All Millage
 - State PP Tax
 - Total PP Tax
- [-] Final Property Tax Values
 - All Appraised Property
 - All Assessed Property
 - All Property Tax

| Operation | Operand | |
|--------------------------|-----------------------------------|--------|
| All Appraised Property = | Total Appraised Value | Delete |
| + | Total Appraised Personal Property | |
| + | | |

Add to debug report

Database Variables User Defined Variables Calculator Tools Brackets Conditions

Real Property Business Personal Property

Variable List

- [-] Real Property
 - [+] Indicators
 - [+] GIS Information
 - [+] Mill Rates
 - [+] Property Values and Tax

Property Tax Model

Policy Simulation Report Incidence Economic Manager Selected Model: Property Tax Model

Policy Creator - C:\PolicyLinks\Alabama Tax Models\Project Files\BHines\Property\Policy\Default All Property Tax 2014 with other.pol

File Tools Help

Default All Property Tax 2014 with other

- Real Property
 - Total Appraised Value
 - Database Assessment Value
 - Assessed Value
 - Parameters
 - Exemptions
 - State Exemption
 - County Exemption
 - County School Exemption
 - City Exemption
 - City School Exemption
 - Applying Exemptions
 - Initial State Value
 - State Value with Exempt
 - Initial County Value
 - County Value with Exem
 - Initial County School Val
 - County School Value with
 - Initial City Value
 - City Value with Exempt
 - Initial City School Value
 - City School Value with Ex
 - State Property Tax**
 - County No School Property Tax
 - County School Property Tax
 - City no School Property Tax
 - City School Property Tax
 - Special Property Tax
 - Total Real Property Taxes
- Personal Business Property
 - Total Appraised Personal Propert
 - Database Assessed Personal Pro
 - Personal Property Assessment R
 - Assessed Personal Property
 - Parameters
 - Exemption Code
 - State Mill Rate
 - County No School Mill Rate
 - County School Mill Rate
 - City No School Mill Rate
 - City School Mill Rate
 - Initial Special Mill Rate
 - Final Special Mill Rate
 - Total All Millage
 - State PP Tax
 - Total PP Tax
- Final Property Tax Values
 - All Appraised Property
 - All Assessed Property
 - All Property Tax

| Operation | Operand | |
|----------------------|----------------------------|--------|
| State Property Tax = | State Value with Exemption | Delete |
| * | State Mill Rate | |
| + | | |

Add to debug report

Database Variables User Defined Variables Calculator Tools Brackets Conditions

Real Property Business Personal Property

Variable List

- Real Property
 - Indicators
 - Tax Year
 - Exemption Code
 - Improvement Type
 - Total Square Feet
 - Land Use Code
 - GIS Information
 - County
 - Parcel ID
 - Zip Code
 - Total Acres
 - Mill Rates
 - Total Millage
 - State Mill Rate
 - County No School Mill Rate
 - County School Mill Rate
 - City No School Mill Rate
 - City School Mill Rate
 - Property Values and Tax

Property Tax Model

Policy Simulation Report Incidence Economic Manager Selected Model: Property Tax Model

Report Generation

File Tools

Report Tree

- Report Parameters
- Reports
 - County Reports
 - CountyBook.xlsx
 - County Report ALL_ALL.htm
 - County Report ALL_Class 1.htm
 - County Report ALL_Class 2.htm
 - County Report ALL_Class 3.htm
 - County Report ALL_Class 4.htm
 - County Report ALL_Other.htm
 - County Report ALL_Personal Property.htm
 - County Report ALL_Real Property.htm
 - Custom Brackets
 - ALL
 - New Prop_Custom Brackets_ALLBK.xlsx
 - debug.htm
 - Tax_SummaryALL_ALL.htm
 - Tax_SummaryClass 1_ALL.htm
 - Tax_SummaryClass 2_ALL.htm
 - Tax_SummaryClass 3_ALL.htm
 - Tax_SummaryClass 4_ALL.htm
 - Tax_SummaryOther_ALL.htm
 - Tax_SummaryPersonal Property_ALL.htm
 - Tax_SummaryReal Property_ALL.htm
 - Winners_and_LosersALL_ALL.htm
 - Winners_and_LosersClass 1_ALL.htm
 - Winners_and_LosersClass 2_ALL.htm
 - Winners_and_LosersClass 3_ALL.htm
 - Winners_and_LosersClass 4_ALL.htm
 - Winners_and_LosersOther_ALL.htm
 - Winners_and_LosersPersonal Property_ALL.htm
 - Winners_and_LosersReal Property_ALL.htm
 - comparison.htm
 - MapReport.htm

| Total Value Dollars | | Number of Returns | | | Taxable Returns | | | Total Value | | | Assessed Value | | |
|---------------------|----------|-------------------|-------------------|------------------|--------------------|---------------|----------------------|------------------------|-------------------|----------------------|------------------------|-------------------|--|
| | | Sample (Units) | Aggregate (Units) | Base Plan (000s) | Alternative (000s) | Change (000s) | Base Plan (Millions) | Alternative (Millions) | Change (Millions) | Base Plan (Millions) | Alternative (Millions) | Change (Millions) | |
| -infinity | 25000 | 943,262 | 943,262 | 845.26 | 845.32 | 0.05 | 8,525.41 | 8,525.41 | 0.00 | 1,310.22 | 1,310.22 | 0.00 | |
| 25001 | 50000 | 403,321 | 403,321 | 363.09 | 363.11 | 0.02 | 14,800.62 | 14,800.62 | 0.00 | 2,087.72 | 2,087.72 | 0.00 | |
| 50001 | 75000 | 300,331 | 300,331 | 264.06 | 264.07 | 0.01 | 18,578.91 | 18,578.91 | 0.00 | 2,471.22 | 2,471.22 | 0.00 | |
| 75001 | 100000 | 232,308 | 232,308 | 203.55 | 203.56 | 0.01 | 20,206.48 | 20,206.48 | 0.00 | 2,559.03 | 2,559.03 | 0.00 | |
| 100001 | 125000 | 194,171 | 194,171 | 172.09 | 172.10 | 0.01 | 21,750.67 | 21,750.67 | 0.00 | 2,665.04 | 2,665.04 | 0.00 | |
| 125001 | 150000 | 156,846 | 156,846 | 140.95 | 140.96 | 0.01 | 21,479.60 | 21,479.60 | 0.00 | 2,574.81 | 2,574.81 | 0.00 | |
| 150001 | 175000 | 120,921 | 120,921 | 110.10 | 110.11 | 0.01 | 19,566.91 | 19,566.91 | 0.00 | 2,332.01 | 2,332.01 | 0.00 | |
| 175001 | 200000 | 90,833 | 90,833 | 83.90 | 83.91 | 0.01 | 16,972.60 | 16,972.60 | 0.00 | 2,009.38 | 2,009.38 | 0.00 | |
| 200001 | 250000 | 121,858 | 121,858 | 114.09 | 114.11 | 0.01 | 27,134.80 | 27,134.80 | 0.00 | 3,230.10 | 3,230.10 | 0.00 | |
| 250001 | 500000 | 187,998 | 187,998 | 180.28 | 180.32 | 0.04 | 62,868.34 | 62,868.34 | 0.00 | 7,827.91 | 7,827.91 | 0.00 | |
| 500001 | 1000000 | 48,065 | 48,065 | 47.12 | 47.17 | 0.04 | 32,200.53 | 32,200.53 | 0.00 | 4,662.70 | 4,662.70 | 0.00 | |
| 1000001 | infinity | 23,736 | 23,736 | 23.36 | 23.55 | 0.19 | 91,466.90 | 91,466.90 | 0.00 | 17,528.54 | 17,528.54 | 0.00 | |
| Totals | | 2,823,650.00 | 2,823,650.00 | 2,547.88 | 2,548.28 | 0.40 | 355,551.77 | 355,551.77 | 0.00 | 51,258.69 | 51,258.69 | 0.00 | |

| Total Value Dollars | | Tax | | | Distribution | | | Effective Tax Rate | | |
|---------------------|----------|----------------------|------------------------|-------------------|---------------|-----------------|------------|--------------------|-----------------|------------|
| | | Base Plan (Millions) | Alternative (Millions) | Change (Millions) | Base Plan (%) | Alternative (%) | Change (%) | Base Plan (%) | Alternative (%) | Change (%) |
| -infinity | 25000 | 19.65 | 19.79 | 0.14 | 2.14% | 2.12% | -0.02% | 0.23% | 0.23% | 0.00% |
| 25001 | 50000 | 28.15 | 28.34 | 0.18 | 3.06% | 3.03% | -0.03% | 0.19% | 0.19% | 0.00% |
| 50001 | 75000 | 32.66 | 32.91 | 0.25 | 3.55% | 3.52% | -0.03% | 0.18% | 0.18% | 0.00% |
| 75001 | 100000 | 32.85 | 33.22 | 0.38 | 3.57% | 3.56% | -0.01% | 0.16% | 0.16% | 0.00% |
| 100001 | 125000 | 33.72 | 34.40 | 0.67 | 3.67% | 3.68% | 0.02% | 0.16% | 0.16% | 0.00% |
| 125001 | 150000 | 32.67 | 33.52 | 0.85 | 3.55% | 3.59% | 0.04% | 0.15% | 0.16% | 0.00% |
| 150001 | 175000 | 30.48 | 31.30 | 0.83 | 3.31% | 3.35% | 0.04% | 0.16% | 0.16% | 0.00% |
| 175001 | 200000 | 26.90 | 27.68 | 0.78 | 2.92% | 2.96% | 0.04% | 0.16% | 0.16% | 0.00% |
| 200001 | 250000 | 45.19 | 46.50 | 1.31 | 4.91% | 4.98% | 0.07% | 0.17% | 0.17% | 0.00% |
| 250001 | 500000 | 122.27 | 125.68 | 3.41 | 13.29% | 13.46% | 0.17% | 0.19% | 0.20% | 0.01% |
| 500001 | 1000000 | 84.77 | 86.43 | 1.67 | 9.21% | 9.25% | 0.04% | 0.26% | 0.27% | 0.01% |
| 1000001 | infinity | 430.67 | 434.17 | 3.49 | 46.81% | 46.49% | -0.33% | 0.47% | 0.47% | 0.00% |
| Totals | | 919.98 | 933.94 | 13.96 | 100.00% | 100.00% | 0.00% | 0.26% | 0.26% | 0.00% |

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