

# Prepared for Americans For Fair Taxation

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## The Argus Group: February 4, 1998

This report responds to Ken Kies' letter to Chairman Archer of January 12, 1998. In his letter Mr. Kies propounds several objections to the Americans for Fair Taxation (AFFT) FairTax plan (FairTax) as raised by the Joint Committee on Taxation (JCT) staff. This memorandum addresses those objections with respect to three basic issue areas. They are:

- the revenue neutral sales tax rate,
- compliance and evasion issues, and
- the economic impact of replacing the current tax system with a sales tax.

### **I. The Revenue Neutral Rate**

The JCT, through Mr. Kies' letter, posits that the FairTax would be revenue neutral only at a 30 percent tax-inclusive rate and a 42 percent tax-exclusive rate, and possibly higher (if other factors are considered (see pages 1-2)).

AFFT's analysis of the revenue neutral rate has been generally confirmed by many of the leading public finance economists in the country.

However, the JCT estimate goes against the weight of authority and is difficult to explain on analytical bases. Not only AFFT but many highly regarded researchers disagree with the JCT's opinion. For example, Dale Jorgenson (Harvard) has found that the AFFT plan is revenue neutral at 22.9 percent.<sup>1</sup> Jim Poterba (MIT) has found that the AFFT plan is revenue neutral at 23.1 percent.<sup>2</sup> Laurence Kotlikoff (Boston University) found that the revenue neutral tax rate was 24 percent.<sup>3</sup> Researchers at Stanford, the Heritage Foundation, Fiscal Associates and the Cato Institute have reached similar conclusions (22.3 percent to 24 percent).

This memorandum demonstrates why the JCT analysis is incorrect and why the Jorgenson, Poterba and AFFT analyses that the AFFT plan is revenue neutral at an approximately 23 percent tax-inclusive rate.

### **A. From a Macroeconomic Perspective, the JCT Calculation of the Rate Is Substantially in Error.**

<sup>1</sup> See, *The Economic Impact of the National Retail Sales Tax*, Dale W. Jorgenson.

<sup>2</sup> Letter to AFFT date April 15, 1997.

<sup>3</sup> See *Replacing the U.S. Federal Tax System with a Retail Sales Tax – Macroeconomic and Distributional Impacts*.

A comprehensive consumption tax that taxes all consumption of any type does not have a tax base equal to only 59 percent of GDP as the JCT is claiming and it certainly does not have a tax base equal to only 42 percent of GDP as the JCT is implicitly claiming in its tax-exclusive rate calculation. Given the absolute breadth of the AFFT consumption tax base (no exceptions, no exclusions, all consumption spending is taxed) such claims are patently implausible. They are particularly implausible in view of the fact that the AFFT plan taxes both private and government consumption and uses a tax prepayment approach on government investment and investment in owner-occupied housing.

One way of viewing the revenue neutral rate needed under the FairTax replacement plan is to consider the effective rate to be equivalent to the following:

Federal Taxes That Must Be Raised/GDP  
Tax base/GDP

The proportion of the taxes raised under the FairTax should bear the same ratio to GDP as the taxes to be replaced by the FairTax bear to GDP.

To arrive at our numerator, the taxes to be raised are the AFFT-repealed taxes; namely, the payroll taxes, income taxes, self-employment taxes, corporate income taxes, capital gains taxes and transfer taxes (death and gift). These replaced taxes, for fiscal year 1998, account for 17.8 percent of GDP.<sup>4</sup> That is because Federal receipts, as a percentage of GDP, are approximately 19.1 percent, and the FairTax plan would repeal 93 percent of current federal taxes and fees.<sup>5</sup> As for the denominator, since investment accounts for 14.6 percent of GDP, the FairTax base can be estimated to be about 85.4 percent of GDP.<sup>6</sup> 17.8 percent divided by 0.854 is 20.8 percent, the required revenue neutral AFFT tax rate (before the rebate is considered).<sup>7</sup>

<sup>4</sup> Budget of the United States Government, Fiscal Year 1998, Historical Tables, Tables 2.1-2.5, pp. 30-41.

Tax	FY 1998 Revenue
Individual Income Tax	\$ 691.2
Corporate Income Tax	\$ 189.7
Social Insurance Taxes	\$ 557.8
Estate and Gift Taxes	\$ 18.8
Total Repealed	\$1,457.5
Total Receipts	\$1,566.8
AFFT Repealed as a percentage of Total:	93.0%

The 17.8 percent figure is simply a product of 93% \* 19.1%.

<sup>5</sup> Budget of the United States Government, Fiscal Year 1998, Historical Tables, Table 1.3, p. 24.

<sup>6</sup> Before various base expanding and contracting adjustments.

<sup>7</sup> This is in keeping with the macroeconomic identity  $Y \equiv C + I$  where Y is output (i.e. GDP), C is consumption and I is investment. This identity is sometimes reformulated as  $Y \equiv C + I + G$  where G is government and C and I are private consumption and private investment, respectively. However, government expenditures in turn fall into either the consumption (C) or investment (I) categories. Most government spending is of the consumption type and since

From this aerial view, the conclusion reached by the JCT is clearly off target. In order for the JCT's 30 percent tax-inclusive rate to be correct, the AFFT tax base would need to fall to 59 percent of GDP. In other words, the correct base would be about 31 percent less than the base we estimate. Likewise, in order for the JCT's 42 percent tax-exclusive rate to be right, the AFFT tax base would need to fall to 42 percent of GDP.<sup>8</sup>

**B. Detailed Analyses:**

**1. The JCT Estimate is Flawed Because it Fails to Add the AFFT-repealed Taxes Back Into the Economy And Assumes Inconsistently That Both the Pre-Tax Prices Will Fall but That the Purchasing Power of Gross Returns Will Remain Constant.**

JCT errs in failing to acknowledge that NIPA personal consumption expenditures (PCE) is already a net of tax concept. By doing so, the JCT is effectively assuming away the fact that the income tax and payroll tax are repealed in the AFFT plan.

In his letter, Mr. Kies writes:

*The AFFT derives the “tax-inclusive rate (with rebate) of 22.8 percent by increasing the “net tax base” (“net” meaning net of a rebate on essential purchases) by the amount of the tax rate, and calculating a tax-inclusive rate based on the inflated base.”*

In making this statement, the JCT errs in failing to acknowledge that NIPA personal consumption expenditures (PCE) is already a net of tax concept.

Tables 1 shows the derivation of the FairTax base and reconciles the tax base with GDP.<sup>9</sup> This table enables one to see how the FairTax base can be thought of as being built “up” from

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the AFFT plan adopts the tax prepayment approach on government investment (as well as investment in owner-occupied housing) all G would be in the AFFT tax base as it is currently.

<sup>8</sup> These general calculations are as follows:

$$(\text{Revenues Replaced as a \% of GDP}) \div (\text{GDP} - \text{Investment (i.e. Consumption)}) = \text{Revenue Neutral Tax Rate}$$

AFFT rate	$17.8 \div 0.854 = 20.8$
JCT Tax-inclusive Rate	$17.8 \div x = 30.0$ , solving for x, x equals 0.59
JCT Tax-exclusive Rate	$17.8 \div y = 42.0$ , solving for y, y equals 0.42

<sup>9</sup> *Survey of Current Business*, NIPA Tables, August, 1997 setting forth 1996 figures. Using 1995 figures (set out in tab 9 of the AFFT position paper book), the tax base is \$5,739.9 billion. The amount of revenue to be raised is \$1,362 billion. Without the rebate, the tax-exclusive tax rate would be 23.7 percent ( $\$1,362/\$5,739.9$ ) and the tax-inclusive tax rate would be 19.1 percent ( $0.237/1.237$ ).

For each family, the rebate is the sales tax rate times the poverty level for that family's size. The total cost of the rebate (and increase in the amount of revenue that must be raised) is the combined rebate for every family. Because the rebate is invariant no matter what a family's income or consumption, the equivalent revenue loss may be calculated by reducing the tax base by the appropriate poverty level for a given family size times the number of families of that size. This combined rebate amount was \$1,137.2 billion in 1995. Thus the tax base net of rebate

personal consumption expenditures or calculated “down” from GDP. As it should, either method leads to the same result. The AFFT tax base is basically PCE with some adjustments, as shown in Tables 1. Table 2 reconciles a comprehensive income tax base income and NIPA income measures to the national FairTax base. Table 2 shows that indeed PCE are expenditures made after social insurance and payroll taxes and income taxes (see lines 16 and 19, Table 2). Since the base is net of tax, converting the rate to a tax-inclusive rate is appropriate for the rate to be comparable to income tax or flat rates.

**Table 1a**  
**The Components of the National FairTax Base (1996)<sup>10</sup>**

Item	\$ billions
1. Personal Consumption Expenditures	5,207.6 <sup>11</sup>
2. Purchase of New Single-Family Homes	159.1 <sup>12</sup>
3. Purchase of New Mobile Homes	10.3
4. Improvements to Single Family Homes	56.0 <sup>13</sup>
5. Expenditures in the U.S. by Non-residents	82.7 <sup>14</sup>
<b>6. Subtotal (Lines 1-5 inclusive)</b>	<b>5,515.7</b>
7. Imputations for Owner-Occupied Housing	-564.1 <sup>15</sup>
8. Foreign Travel by U.S. Residents	-27.5 <sup>16</sup>
9. Expenditures Abroad by U.S. Residents	-2.6
10. Education Expenditures	-89.2 <sup>17</sup>
<b>11. Subtotal (Lines 7-10 inclusive)</b>	<b>-683.4</b>
12. State and Local Government Consumption Spending	730.9 <sup>18</sup>
13. State and Local Government Purchases of New Structures and Equipment	155.7 <sup>19</sup>
14. Federal Government Consumption Spending	451.4 <sup>20</sup>
15. Federal Government Purchases of New Structures and Equipment	68.5 <sup>21</sup>
<b>16. Subtotal (Lines 12-15 inclusive)</b>	<b>1,406.5</b>
<b>17. National FairTax Base (Sum of lines 6, 11 and 16)</b>	<b>6,238.8</b>

was \$4,602.8 billion. With a rebate, the tax-exclusive tax rate would be 29.6 percent ( $\$1,362/\$4,602.8$ ) and the tax-inclusive tax rate would be 22.8 percent ( $0.296/1.296$ ).

<sup>10</sup> *Survey of Current Business*, NIPA Tables, August, 1997 setting forth 1996 figures.

<sup>11</sup> NIPA Table 2.6.

<sup>12</sup> NIPA Table 5.4.

<sup>13</sup> Total residential improvements were \$67.7 billion. Assuming that the ratio of new single family housing to total new housing units is the same, the share of single family residential improvements would be \$56.0 billion. It is implicitly assumed by this that the others are entirely commercially operated.

<sup>14</sup> NIPA Table 2.6.

<sup>15</sup> NIPA Table 8.19.

<sup>16</sup> Both the AFFT plan and the Schaefer-Tauzin sales tax plan would tax one half of the value of travel originating or terminating in the U.S. The total figure is \$54.9 billion. However, since the proposed sales tax rule would also tax one-half of foreign travel to the U.S., then one-half of the value of foreign travel to the U.S. should be taxed. The magnitude of this figure is not know to the author. Table 2.6.

<sup>17</sup> NIPA Table 2.6.

<sup>18</sup> NIPA Table 3.3.

<sup>19</sup> NIPA Table 3.7.

<sup>20</sup> NIPA Table 3.2.

<sup>21</sup> NIPA Table 3.7.



**Table 1b**  
**Reconciliation of National FairTax Base and Gross Domestic Product**

18. Gross Domestic Product	7,636.0
19. Less: Gross Private Domestic Investment	-1,116.5
20. Less: Human Capital Investment (Education Expenditures)	-89.2
21. Less: Imputations for Owner-Occupied Housing	-564.1
22. Plus Adjustment for Purchase of and Improvements to Homes	225.4
23. Plus: Expenditures in U.S. by Non-residents	82.7
24. Less: Net Exports (or plus net imports, see note)	94.8 <sup>22</sup>
25. Less: Foreign Travel by U.S. Residents	-27.5
26. Less: Expenditures Abroad by U.S. Residents	-2.6
<b>17. Equals: National FairTax Base</b>	<b>6,238.8</b>

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<sup>22</sup> Since net exports are negative, subtracting them is positive.

**Table 2**  
**Reconciliation of Comprehensive Income Tax Base and National FairTax Base (1996)<sup>23</sup>**

1. Total Wages and Salaries: Government and Other	3,632.5 <sup>24</sup>
2. Other Labor Income	407.6 <sup>25</sup>
3. Proprietors' Income with Inventory Valuation and Cap. Consumption Adjust.	520.3 <sup>26</sup>
4. Rental Income of Persons with Capital Consumption Adjustment	146.3 <sup>27</sup>
5. Personal Interest Income	735.7 <sup>28</sup>
6. Personal Dividend Income	291.2 <sup>29</sup>
7. Gov't Transfer Payments to Persons (Social Security, unemployment, etc.)	1,034.4 <sup>30</sup>
8. Imputations for Owner-Occupied Housing	-564.1 <sup>31</sup>
9. Capital gains (net)	129.0 <sup>32</sup>
10. Business Transfer Payments to Persons	33.6 <sup>33</sup>
<b>11. Personal Income Tax Taxable Base (Lines 1-10 inclusive)</b>	<b>6,366.5</b>
12. Corporate Profits with Inventory Valuation and Capital Consumption Adjust.	735.9
<b>13. Total Comprehensive Income Tax Base (lines 9-10 inclusive)</b>	<b>7,102.4</b>
12. Corporate Profits with Inventory Valuation and Capital Consumption Adjust.	-735.9
14. Imputations for Owner-Occupied Housing	564.1
15. Capital Gains (net)	-129.0
16. Personal Contributions to Social Insurance	-306.3
<b>18. NIPA Personal Income (Line 13, less lines 12, 15 and 16 plus line 14)</b>	<b>6,495.2</b>
19. Personal Tax and Non-Tax (Fee) Payments	-886.9 <sup>34</sup>
20. Interest Paid by Persons	-145.2 <sup>35</sup>
21. Personal Transfer Payments	-15.9 <sup>36</sup>
22. Personal Savings	-239.6 <sup>37</sup>
<b>23. NIPA Personal Consumption Expenditures</b>	<b>5,207.6</b>
24. Educational Expenditures	-89.2
25. Adjustment for Housing (net)	-338.7 <sup>38</sup>
26. Expenditures in U.S. by Non-Residents	82.7
27. Foreign Travel and Expenditures Abroad by U.S. Residents	-30.1
28. Government Consumption and Gross Investment	1,406.5
<b>29. National FairTax Base (Lines 23-28)</b>	<b>6,238.8</b>

<sup>23</sup> *Survey of Current Business*, NIPA Tables, August, 1997 setting forth 1996 figures. See also Table 1 this memo.

<sup>24</sup> NIPA Table 2.1.

<sup>25</sup> NIPA Table 6.11C.

<sup>26</sup> NIPA Table 2.1.

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Social Security benefits (OASDI) are partially taxed today. Medicare benefits are not. These totaled \$537.6 billion in 1996. Unemployment benefits (\$22.0 billion in 1996) are partially taxed. Veterans benefits (\$21.6 billion in 1996) are not taxed today. Government employees retirement benefits (\$142.5 billion in 1996) are generally taxed today. Other benefits (\$344.2 billion in 1996) may or may not be taxed.

<sup>31</sup> Some comprehensive income tax advocates would suggest taxing the rental value of owner-occupied housing but it is generally viewed as an extreme proposal. The rental value of owner-occupied housing is included in NIPA personal income and GDP.

<sup>32</sup> Derived from \$115 billion in net capital gains realized in 1994 increased proportionally to NIPA personal income.

<sup>33</sup> NIPA Table 2.1 and others.

<sup>34</sup> NIPA Table 2.1.

<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

<sup>38</sup> Lines 2, 3, 4 and 7 from Table 1 of this memo.

PCE is equivalent to personal income minus several elements; savings, personal tax and “non-tax payments”<sup>39</sup> net personal interest paid, and transfer payments (basically gifts). If, hypothetically speaking, we were to repeal the income tax<sup>40</sup> and not replace it with anything, then PCE would increase dramatically (and by the amount of the repealed tax if one were to assume none of the windfall would be saved).<sup>41</sup> Payroll taxes are a little different because of the way NIPA accounts for them. Both employer and employee payroll taxes are present in the labor components of GDP. Personal (employee) contributions for social insurance are included in personal income while employer contributions are included as supplements to wages and salaries.

The JCT is effectively assuming away the fact that the income tax and payroll tax are repealed in the AFFT plan. That money will no longer be withheld from paychecks or otherwise collected. It will either be spent, invested, or saved for later consumption, but it will in any event be available to pay the FairTax.

One could, of course, argue that pre-tax returns to capital and gross wages will decline if the incidence of the FairTax is backwards (i.e. incident on the factors of production). In this case, pre-sales-tax prices will decline, FairTax-inclusive prices will be comparable to prices today but a given gross return to capital or gross wage will command more real resources (since the gross return or wage will not be subject to income or payroll tax).

To illustrate, a taxpayer paying an effective rate of 50 percent (when combining income and self-employment taxes, for example) must earn \$2 to buy \$1 in goods, having only \$1 of consumable income. If we assume backwards incidence, after the FairTax is implemented the taxpayer earning \$2 would be able to buy \$2 in goods. However, since incidence would fall upon the factors of production then that person may see their pre-tax or gross wage decline to below \$2. If it falls fully on the factors of production, assuming no other factors, the wages could theoretically reduce to \$1. However, the worker would still have to work as long to buy the same quantity of goods under the FairTax as under the income tax because the price of the good would fall by this amount.

In summary, if the incidence is forward, then this person would earn more per unit labor, but they would pay a higher price for the product. If the incidence is backwards, the product price will decline.

However, while a backwards incidence is possible, the JCT analysis is trying to “have it both ways.” Namely, the JCT is maintaining at the same time that both (1) the purchasing power of gross returns from labor or capital will remain constant (rather than rise since they are no longer being taxed) but (2) pre-tax prices will fall (i.e. the tax base will shrink). This is the same effect as arguing that (1) pre-tax prices would rise, but (2) wages would fall. Both of these positions, if held simultaneously, are inconsistent with one another, yet on page two of the letter, Mr. Kies writes:

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<sup>39</sup> A NIPA “non-tax payment” is usually a mandatory fee.

<sup>40</sup> Personal contributions for social insurance are included in national income but not, for reasons that are unclear, in personal income.

<sup>41</sup> Similarly, this assumes that all of the money saved from the repeal of the corporate income tax will be saved.



*In order to derive the rate that consumers would observe at the cash register, it is necessary to decrease the AFFT's NIPA derived base to take out the taxes embedded in the NIPA figure.*

In other words, JCT is assuming that the tax base should not be adjusted up to account for the repeal of the income tax and payroll taxes and that the consumption tax base will shrink by the amount of the FairTax (i.e. to \$3,240.5 billion from \$4,602.8 billion in the JCT letter). The JCT cannot assume both simultaneously. To do so is to assume, in effect, that the income and payroll tax are retained and the sales tax is added-on.

## **2. The JCT Therefore Assumes the Economy Shrinks by the Amount of the Taxes Replaced.**

As demonstrated in table 2, Personal Consumption Expenditures (PCE) – the \$4,602.8 billion in the JCT letter<sup>42</sup> – is already a net of income and net of payroll tax concept. It is the amount of money spent after income taxes and payroll taxes are paid. The JCT is assuming that people will spend only \$4,602.8 billion including the sales tax and only \$3,240.5 exclusive of sales tax. All of the money paid in (repealed) income and payroll taxes – about \$1.4 trillion – evaporates in this scenario. In other words, JCT is effectively assuming that the American economy will shrink by \$1.4 trillion under the AFT plan.

If we were to abstract away from this exercise, the longer run economic growth effects, enhanced trade, reduced compliance/evasion, reduced compliance costs and other variable sum game effects on the economy, we should at least conclude that the economy would remain roughly the same size before a sales tax and after. That is because the same amount of money will be extracted from the economy in the form of taxes.

The income tax taxes consumption by imposing a wedge between the income that must be earned and the price received by the sellers of goods and services. For example, if the marginal tax rate is 36 percent<sup>43</sup> as it is for most middle class Americans, then every dollar earned only enables one to purchase 64 cents in goods. Or stated differently, to buy one dollar in goods one must earn \$1.56. Similarly, the FairTax imposes a wedge between the price (net of tax) received by the sellers of goods and services and the amount paid by consumers (i.e. the amount that must be earned). A consumer would have to pay \$100 but the retailer would keep only \$77. The difference (\$23) is the tax wedge. The primary difference between a pure income tax on the one hand, and a pure sales tax on the other, is that deferred consumption (savings and investment) may not be taxed immediately by the FairTax but is taxed immediately by the income tax (although only partially so by the present system). Since deferred consumption (savings and investment) is only about 15 percent of the economy, this temporary reduction in the immediate

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<sup>42</sup> Using 1995 figures.

<sup>43</sup> 28 percent plus 7.65 percent in payroll tax equals 35.65. Including the employer share of the payroll tax would increase this rate to 43.3 percent and state taxes still higher.

tax base cannot account for the JCT rate of 30 percent (fully 30 percent higher than the AFFT rate with a rebate and almost 70 percent higher than the replaced taxes as a percentage of GDP.

Not only is the JCT incorrect from a static analysis, but over a relatively short period of time, the economy will not shrink, it will grow dramatically.

Although the magnitude of the economic growth generated by a flat rate consumption tax generates lively debate among economists, virtually all agree that the large marginal tax rate reductions in the AFFT tax plan combined with neutral taxation of savings and investment, will have powerful positive effects on the economy. Work by Harvard economist Dale Jorgenson shows a quick 9 to 13 percent increase in the GDP.<sup>44</sup> Similarly, Boston University economist Laurence Kotlikoff predicts a 7 to 14 percent increase.<sup>45</sup> Much of this increase is predicted to come in the first several years. Work by Gary Robbins shows that replacing the current tax system with a flat rate system that taxed capital and labor income equally – such as the FairTax – would increase the GDP 36.3 percent and increase private output by 48.4 percent over the long run.<sup>46</sup> Even work by Nathan Associates, commissioned by steadfast opponents of a national sales tax and which should be viewed as the worse case scenario, shows that the economy would be one to five percent larger under a sales tax than in the absence of reform.<sup>47</sup> In short, the economic gains to the American people from replacing the income tax with a national sales tax would be very large indeed. The tax base would grow correspondingly and the revenue neutral rate would fall over time.

These studies are primarily driven by the macroeconomic impact of a larger capital stock and to a much lesser extent labor market response. The economy will also be much more productive due to the microeconomic efficiencies caused by a more efficient allocation of scarce economic resources based on economic rather than tax considerations and because of much lower private sector compliance costs.

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<sup>44</sup> Jorgenson, National Tax Research Committee study, “The Economic Impact of the National Retail Sales Tax.” See also, “The Economic Impact of Fundamental Taxing Consumption”, Dale W. Jorgenson, Testimony before the House Ways and Means Committee, March 27, 1996 and “The Economic Impact of Fundamental Tax Reform”, Dale W. Jorgenson, Testimony before the House Ways and Means Committee, June 6, 1995.

<sup>45</sup> Kotlikoff, National Tax Research Committee study, “Replacing the U.S. Federal Tax System with a Retail Sales Tax – Macroeconomic and Distributional Impacts.” See also, “The Economic Impact of Replacing Federal Income Taxes with a Sales Tax”, Laurence J. Kotlikoff, April 15, 1993, Cato Institute Policy Analysis.

<sup>46</sup> Robbins, currently a principal in Fiscal Associates, is former Chief of Applied Econometrics at the U.S. Treasury Department, “Looking Back to Move Forward: What Tax Policy Costs Americans and the Economy,” Gary Robbins and Aldona Robbins, Policy Report No. 127, September 1994, published by the Institute for Policy Innovation, p. 31, p. 47.

<sup>47</sup> “Replacing the Federal Income Tax with a Consumption-Based Tax System”, prepared by Nathan Associates for the National Retail Institute (1996), p. 29. To achieve results as modest as they did, Nathan Associates made virtually every judgment call in a way that would show lower gains from implementing a sales tax. They assumed away international capital flows (p. 30) so all increased investment in their model must be financed by lower domestic consumption rather than partially by foreign investment, assumed low elasticities, seemingly made no acknowledgment of the reduction in the tax bias against work and the concomitant increase in employment and hours worked and so on. The study shows, even with all of these adverse assumptions, that consumption will return to levels that would be achieved in the absence of reform by the fourth year and will be higher every year thereafter (after having fallen a maximum of less than one percent (p. 32)).

### 3. The JCT Should Have to Explain Why the Base of the FairTax is So Much Less Than the Base of the Flat Tax When the Two Bases are Theoretically Comparable

The JCT should explain why one comprehensive consumption tax (the flat tax) supposedly has a tax base almost twice as large as another comprehensive consumption tax (the FairTax). This should prove an impossible task since the FairTax base is very close to the flat tax base.

Most, if not all, commentators agree that the Hall-Rabushka/Armey-Shelby flat tax is a flat rate consumption tax in the form of a subtraction method consumption-type value added tax which taxes most labor value added at the individual level (including labor value added in the government and non-profit sectors) and capital value added at the business level.<sup>48</sup> Employee benefits are taxed at the firm level. Table 3 derives the flat tax base. This table is conventional and unremarkable and very similar to tables that others have produced. Table 4 shows that the flat tax base and the national FairTax base are very similar. This should not be surprising since they are both broad-based consumption taxes.

**Table 3a**  
**The Components of the Hall-Rabushka Flat Tax Base (1996)<sup>49</sup>**

Item	\$ billions
1. Wages and Salaries: Paid by Government	642.6 <sup>50</sup>
2. Wages and Salaries: Other	2,991.0 <sup>51</sup>
3. Pension and Retirement Benefits (estimated)	230.3 <sup>52</sup>
<b>4. Individual Tax Taxable Base (Lines 1-3 inclusive)</b>	<b>3,863.9</b>
5. Gross Business Receipts	6,401.0 <sup>53</sup>
6. Private Health Insurance, Life Insurance and Worker's Compensation Ins.	307.1 <sup>54</sup>
<b>7. Gross Business Tax Base (Lines 5-6 inclusive)</b>	<b>6,708.1</b>
8. Indirect Business Taxes	-563.0 <sup>55</sup>

<sup>48</sup> Robert Hall and Alvin Rabushka said so in their first book, 'The Flat Tax', and Robert Hall said so before the Ways and Means Committee in June, 1995

<sup>49</sup> *Survey of Current Business*, NIPA Tables, August, 1997 setting forth 1996 figures.

<sup>50</sup> NIPA Table 1.15.

<sup>51</sup> NIPA Table 6.3C

<sup>52</sup> Government employee benefits are \$142.5 billion per NIPA Table 2.1 in 1996. The Summer, 1997 *SOI Bulletin* shows 205.4 billion of pension income in adjusted gross income in 1994 (Table 1). Increasing this amount in proportion to the increase in personal income gives \$230.3 billion.

<sup>53</sup> Gross Business Product per NIPA Table 1.7. Non-profit institutions would be exempt under the flat tax. It is assumed that government enterprises would be exempt since neither the Hall Rabushka book nor H.R. 1040 provide for such a tax.

<sup>54</sup> See NIPA Table 8.15. Private health insurance (\$262.7 billion), private life insurance (\$7.4 billion) and private worker's compensation (\$37.0 billion) are a total of \$ billion.

<sup>55</sup> NIPA Table 1.9.

9. Wages and Salaries and Pension Contributions: Business	-2,795.0 <sup>56</sup>
10. Business investment in producers' durable equipment and structures	- 931.6 <sup>57</sup>
11. Housing Services Imputation	-314.8 <sup>58</sup>
<b>12. Business Tax Taxable Base (Lines 7-11 inclusive)</b>	<b>2,103.7</b>
<b>13. Non-profit Institutions and Government Paid Fringe Benefits</b>	<b>274.7<sup>59</sup></b>
<b>14. Total Flat Tax Base (Sum of Lines 4, 12 and 13)</b>	<b>6,242.3</b>

**Table 3b**  
**Reconciliation with Gross Domestic Product**

<b>11. Business Tax Taxable Base (Lines 7-10 inclusive)</b>	<b>2,103.7</b>
6. Private Health Insurance, Life Ins. and Worker's Compensation Insurance	-307.1
8. Indirect Business Taxes	563.0
9. Wages and Salaries and Pension Contributions: Business	2,795.0
10. Business Investment in Producers' Durable Equipment and Structures	931.6
11. Housing Services Imputation	314.8
<b>5. Gross Business Product</b>	<b>6,401.0</b>
14. Household and Institutions Wages and Salaries	295.3
15. Household and Institutions: Other Compensation	50.8
<b>16. Households and Institutions Product</b>	<b>346.0</b>
1. Wages and Salaries: Paid by Government	642.6
17. Government Other: Compensation	212.7
18. Adjustment for Imputations and Capital Consumption	33.7
<b>19. Government Product</b>	<b>889.0</b>
<b>Gross Domestic Product (Sum of Lines 5, 16, and 19)</b>	<b>7,636.0</b>
20. Wages and Salaries: Business	2,700.2
14. Wages and Salaries: Household and Institutions	295.3
1. Wages and Salaries: Government	642.6
21. Wages and Salaries: Adjustment for Accrual Method	-4.5

<sup>56</sup> Table 8.15 puts private pension plan contributions at 94.8 billion (all assumed to be business). Wages from Table 1.15.

<sup>57</sup> Table 5.4. Private fixed investment (\$1,090.7 billion) less single family structures (\$159.1 billion).

<sup>58</sup> Table 8.19, line 6.

<sup>59</sup> Business employers pay tax on fringe benefits because non-cash compensation to employees is not deductible. The flat tax imposes a compensating tax on non-cash compensation to employees paid by non-profit institutions and governments. It is not exactly clear how taxable non-cash compensation would be defined. See, *The Flat Tax* (2<sup>nd</sup> Edition), op. cit., p. 120. Per Tables 6.2C and 6.3C, government compensation exceeds wages and salaries by \$212.7. Households and institutions had total compensation of \$346 billion. Assuming the ratio between total compensation and salaries and wages is the same on average as the entire economy (82.1 percent), then the benefits amount would be \$62.0 billion.

22. Total Wages and Salaries	3,633.6
3. Pensions and Retirement Benefits	230.3
<b>4. Individual Tax Taxable Base</b>	<b>3,863.9</b>

However, the JCT is arguing that the FairTax base is a small fraction of the flat tax base (as calculated by most analysts). They are arguing (page 2 of their letter) that the FairTax base is substantially smaller than Personal Consumption Expenditures and smaller still than consumption as broadly defined in NIPA. The flat tax base, in contrast, would be basically factor incomes less investment. The process of reconciling a flat tax revenue estimate (with the same size rebate or exemption) with a sales tax revenue estimate will show that the JCT estimate of the AFFT tax rate is incorrect.<sup>60</sup> In reality, the FairTax base is substantially similar in size to the flat tax base.

Comparing Table 1 and Table 3, we see that the FairTax base is \$6,238.8 and the flat tax base is \$6,242.3. There is only \$3.5 billion difference (i.e. less than 6/100ths of one percent).

Table 4 below presents a summary comparison.

**Table 4**  
**The National FairTax and the Flat Tax Bases Compared**

Item	Sales Tax	Flat Tax
<b>18. Gross Domestic Product</b>	<b>7,636.0</b>	<b>7,636.0</b>
19. Less: Gross Private Domestic Investment	-1,116.5	
20. Less: Business Investment		-931.6
21. Less: Indirect Business Taxes		-563.0
22. Plus: Non-profit and Government Paid Fringe Benefits		274.7
23. Plus: Pension and Retirement Benefits		230.3
24. Other Adjustments		-89.3 <sup>61</sup>
25. Less: Human Capital Investment (Education Expenditures)	-89.2	
26. Less: Imputations for Owner-Occupied housing	-564.1	
27. Plus Adjustment for Purchase of and Improvements to Homes	225.4	
28. Plus: Expenditures in U.S. by Non-residents	82.7	
29. Less: Net Exports (or plus net imports)	94.8	
30. Less: Foreign Travel by U.S. Residents	-27.5	
31. Less: Expenditures Abroad by U.S. Residents	-2.6	
<b>32. Equals: National FairTax/Flat Tax Base</b>	<b>6,238.8</b>	<b>6,242.3</b>

<sup>60</sup> The effective exemption levels or zero bracket is lower in the AFFT sales tax than in the flat tax. On the other hand, the flat tax retains the payroll tax.

<sup>61</sup> Including \$4.5 billion in differences between wages accruals and disbursements, capital costs consumption allowances and output on government capital goods (#33.7 billion) and differences in other labor compensation and flat definitions of taxable fringe benefits.

**C. Government Value Added Should be in the Tax Base The Same As It Is In the base of the Income and Flat Tax Schemes**

In the absence of a special rule, a sales tax would fail to tax government value added at any stage. In the absence of a tax on government payroll, therefore, the tax base would be much smaller than under either the income tax or the flat tax schemes. Assuming spending were held constant, this would effectively increase the relative size of government by the proportion of revenues relative to wages and government purchases that are foregone. The JCT may be incorrectly and inadvertently increasing the size of the government.

We anticipate that one possible source of confusion on the part of the JCT is the tax treatment of government output. How should such output be taxed, if at all?

The GDP includes, of course, both government value added and private value added. Government value added is included at “cost”, which is *primarily* the wages paid to its employees. The income tax taxes income whether the source is government or the private sector, and by doing so, taxes government output. While the government pays its employees a gross amount and then withholds the income tax from their paychecks, we could, of course, just pay government workers a lower tax-free wage. This would accomplish the same objective. However, we choose not to do this: with the result that we have higher spending (from paying pre-tax wages) and higher tax revenue (from the income tax on those wages).

And it is important to note that the flat tax does tax government (and non-profit) output because government (and non-profit) wages are included in the tax base. To be consistent, the AFFT FairTax does so as well.

A pure subtraction method VAT (aka a business transfer taxes) would not typically tax government value added. The Hall-Rabushka flat tax variant is an exception, however. Unlike a normal subtraction method VAT, the flat tax allows a deduction for wages and then taxes wages at the individual level. In doing so, it also provides the mechanism for taxing government wages (while a normal BTT only taxes business wages by taxing receipts and denying the deduction for wages). Thus, the flat tax base is much larger than the base of a normal BTT (i.e. larger by the size of the government wages).<sup>62</sup>

So today, both the income tax and the flat tax tax government output.

However, a sales tax, in the absence of a special rule, would, like a pure BTT, not tax government value added by employee wages. In the absence of a tax on government payroll, therefore, the tax base would be much smaller than under either the income tax or the flat tax schemes. Assuming spending was held constant, this would effectively increase the relative size of government by the proportion of revenues relative to wages and government purchases that

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<sup>62</sup> Even a normal BTT, however, taxes government purchases of goods and services from the private sector since the private revenues from those sales are includible in the taxable base.

are foregone. The FairTax taxes government value added in order to maintain the relative size of the government to the private sector, rather than increasing the size of the government.

Another way of looking at this problem is to examine it from two different perspectives: incidence forwards and backwards.

If we assume that consumption taxes are fully incident on the factors of production, then the return to capital and the return to labor will decline by the amount of the tax. As noted earlier, under this incidence assumption, tax-inclusive prices would not be higher but the return to workers and capital would decline. Thus, in the absence of a special rule, government workers would experience a windfall. Their consumption prices would not go up and their wages would go up by the amount of the repealed income tax but, since government value added is not taxed, their wages would not appear to be subject to downward pressure.<sup>63</sup>

Taking the alternate incidence assumption, namely that the FairTax would be fully passed forward and borne by consumers, government employees would pay the tax just like private sector workers, since tax-inclusive prices would be higher by the amount of the FairTax. Government workers would, of course, have higher pre-tax wages, but the costs of purchasing goods and services would be higher by the amount of the FairTax. However, the inequity in our alternative incidence assumption redounds to the beneficiaries of government who would now be consuming a level of government services that is enlarged by the removal of the wage taxes formally imposed. We collectively would be getting the benefit of government (the Armed Forces, the Consumer Product Safety Commission, National Public Radio, or the JCT on Taxation) free of tax. Those who disproportionately benefit from government would disproportionately benefit from this effective increase in government spending. Or, put another way, we would have legislated a huge increase in the size of the government that is paid for by the private sector.

Another way of addressing this problem is to simply take the National Income Product Accounts and start calculating the tax base under the various consumption taxes. If one goes through this exercise to demonstrate the oft-repeated equivalence of the various consumption tax plans, it becomes clear that in the absence of a special FairTax rule regarding government, the flat tax has a broader base because it taxes government wages. Similarly, a pure income tax is broader not only by the amount of unconsumed capital income but also by the government wages amount.<sup>64</sup>

In the context of a sales tax, then, an employer payroll tax on government wages simply achieves parity with the income tax and the flat tax. Failure to impose this tax would exempt government value added from tax for the first time and constitute a dramatic incentive to consume through the medium of government. The JCT seemingly recognized this in their pamphlet “Impact on State and Local Governments and Tax-Exempt Organizations of Replacing the Federal Income

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<sup>63</sup> Eventually, with free market forces, private sector workers and perhaps political pressure would bid the government salaries down. However, given the rigidity of government pay scales and rules against exchange this may take many years (i.e. government wages may be “sticky”). In the interim, the relative size of government will have increased.

<sup>64</sup> Since the sales tax does not tax the “return” to government investment (i.e. later government consumption scored as government capital consumption in NIPA), using a tax prepayment approach that is equivalent in present value terms to taxing the returns is appropriate.

Tax,” p. 57-58, May 1, 1996. A sales tax should also be imposed on government purchases from the private sector to fully reflect the opportunity cost of that purchase.

Government enterprises (e.g. Amtrak, the Post Office) are a separate case. They can easily be put on equal footing by taxing their sales and exempting their inputs as if they were a private enterprise. If government (and non-profit) enterprises are not subject to tax, they will have a huge relative price advantage over private companies through cross-subsidization.

## II. Compliance and Evasion

The JCT Assumes, Without Empirical or Analytical Foundation, That Compliance Will be Poor Under a Sales Tax.

Mr. Kies writes:

*... the consumption base that the AFFT calculates based on NIPA figures does not account for administrative, measurement and compliance problems that are likely to arise in the collection of sales tax revenues, which would make the tax base lower and the revenue neutral rate higher.*

### A. Compliance Under the Current System: The Significant Breadth of Noncompliance Today

When comparing relative compliance rates under a sales tax with the income tax, JCT should take into consideration the known data on the worsening problem of evasion.

When considering compliance under the FairTax, the JCT should properly compare suspected compliance levels of the FairTax with known compliance levels today. In other words, we should not fail to take into consideration that tax evasion is a major, continuing, apparently irremediable and, more importantly, *growing problem* under the income tax. Any evaluation of the potentiality for evasion under a FairTax must be compared to extant data on the extent of evasion, and the likelihood of increase evasion, under current law.

While there are many determinants and causes of evasion, it is difficult to avoid the conclusion that the income tax is losing legitimacy in the eyes of the public and voluntary compliance is dropping rapidly among those in a position to evade taxes. Based on IRS figures, tax evasion has increased by 67 percent during the past 11 years. As a percentage of Gross Domestic Product (GDP), tax evasion has reached 2.0 percent compared to 1.6 percent in 1991. Taxes evaded continue to be in the range of 22 to 23 percent of income taxes collected. (See table next page). These IRS figures do not include taxes lost on illegal sources of income.

In its most recent report on the tax gap, the General Accounting Office stated:



*Almost every year since 1981 has witnessed legislation to address tax gap issues. These legislative actions generally required information returns reporting on income and deductions, imposed penalties for tax noncompliance, or reduced the opportunity for noncompliance by eliminating certain tax write-offs. IRS estimated that some of these provisions resulted in additional 1990 tax revenue of \$3.4 billion. Even so, IRS' estimated tax gap increased \$50.7 billion in current dollars from tax years 1981 to 1992. However, the growth of the gap could have been higher without these legislative actions.<sup>65</sup>*

**Table 5**  
**Relative Magnitude of Tax Evasion Under the Income Tax 1981-1992<sup>66</sup>**  
**Using Internal Revenue Service Estimates**

	1981	1992
Total tax gap (Real 1992 \$ millions)	\$75,966 <sup>67</sup>	\$127,129
As Percentage of Income Taxes Collected	23.3%	22.0%
As Percentage of Gross Domestic Product	1.6%	2.0%
Real Annual Growth Rate (1981-1992)		6.1 <sup>68</sup>

**Table 6**  
**Tax Evasion Under the Income Tax 1981-1992<sup>69</sup>**  
**Internal Revenue Service Estimates**  
**(\$ millions (inflation adjusted 1992 dollars))**

Source of tax gap	1981 tax gap amount	1992 tax gap amount	Percentage increase
Individual tax gap	\$61,900	\$93,994	51.8%
Unreported income	40,433	62,759	55.2
Sole proprietors	18,714	30,173	61.2
All other income	21,719	32,586	50.0
Overstated deductions	7,449	8,081	8.5
Individual non-filers	5,231	10,233	95.6
Individual remittance gap	8,300	11,400	37.3

<sup>65</sup> Tax Gap: Many Actions Taken, But A Cohesive Compliance Strategy Needed, May 1994, General Accounting Office, GAO/GGD-94-123 (hereinafter 'GAO')

<sup>66</sup> GAO, Supra.

<sup>67</sup> Calculating real taxes using the GDP deflator.

<sup>68</sup> 4.68 percent using a continuously compounding growth rate.

<sup>69</sup> See, GAO, Supra.

Math errors	487	1,521	212.3
Corporate tax gap	14,066	33,135	135.6
Small corporations	4,461	6,999	56.9
Large corporations	8,638	23,716	174.6
Others	167	420	151.5
Corporate remittance gap	800	2,000	150.0
<hr/>			
Total tax gap	\$75,966	\$127,129	67.2%
<hr/>			

According to the IRS, individuals account for \$94 billion of the \$127 billion tax gap and corporations for \$33 billion. About half of the gap is caused by unreported income. If all of this lost tax revenue were collected, the tax burden on law abiding citizens could be reduced by 22 percent.

Periodically, the IRS has conducted extensive audits of taxpayers selected at random and required those taxpayers to document every item on their tax return to the minutest detail. These audits were part of the Taxpayer Compliance Measurement Program or TCMP. The 1988 TCMP sample included audits of over 54,000 individual taxpayers, which represents 104 million taxpayers. TCMP data showed that if all 104 million taxpayers were audited, the tax liabilities reported by an estimated 42 million taxpayers, or 40 percent, would have increased.<sup>70</sup>

The General Accounting Office, in its recent tax gap report said:

*The TCMP data showed that an estimated 33 million of the 42 million taxpayers (82 percent) were not assessed a fraud or negligence penalty, suggesting that much of their noncompliance was unintentional.*

## **B. And We Must Compare This Poor Record of Compliance with the Costs Involved in Maintaining It**

When evaluating the FairTax's level of compliance, the JCT should also take into consideration, not only the poor compliance record today under the income tax, but the costs of sustaining that compliance record in real dollars and civil rights

The rate of compliance is dependent upon several factors which have been explored by economists and socialists in depth. These factors include the perceived risk of detection, the complications of the system, and the perceived rewards or penalties for cheating. Hence, the question of compliance is a relative one: relative to the perceived fairness of the tax system, its visibility (or clarity as to cheating or gaming), its rewards and its punishment.

It is important, therefore, when adjudging the relative compliance rate of the FairTax to fairly compare that proposal with the draconian steps taken to maintain our very poor compliance record today. Let us begin with penalties. In 1995, the IRS assessed over 34 million civil

<sup>70</sup> GAO, *Supra*.

penalties on American taxpayers. Of these, about 4.1 million were forgiven. 22.1 million penalties involved the income tax and 10.6 million involved the payroll tax, taxes which the AFFT FairTax would replace.<sup>71</sup> All of this, despite the roughly \$225 billion or perhaps more spent by the private sector trying to comply with the Federal income tax system.<sup>72</sup>

Although the GAO estimates that forty percent of Americans are not in compliance with the income tax, the reasons for non-compliance are instructive. Taxpayers lacked the requisite knowledge of the tax law; of course, even tax lawyers cannot grasp the entire tax code these days. They interpreted the law differently than the IRS; but the IRS almost always makes aggressive interpretations in favor of the government. They lacked record-keeping sufficient to satisfy the IRS; this from an agency that has such poor internal records that it cannot even be audited. They did their math wrong or they relied on a professional return preparer who got it wrong; if professional tax preparers can't get it right, how are ordinary Americans to do so.<sup>73</sup>

**Table 7**  
**Primary Taxpayer Compliance Measurement Program (TCMP) Reasons for Tax Increase**  
**When Taxpayers Were Not Assessed a Negligence or Fraud Penalty for 1988<sup>74</sup>**  
**(Dollars in millions)**

Reason for noncompliance	Number of taxpayers	Amount of tax increase
Multiple interpretations of tax law	1,230,202	\$1,237
Lack of substantiation	9,074,690	3,765
Incorrect accounting or computational procedures	5,215,212	2,710
Relied on a return preparer and did not help with preparation	4,964,121	3,166
Lacked knowledge of tax laws to prepare accurate return	7,648,492	3,259
Other	5,004,042	1,549
<b>Totals</b>	<b>33,136,759</b>	<b>\$15,686</b>

<sup>71</sup> Internal Revenue Service, 1995 Data Book, Table 15, p. 20.

<sup>72</sup> See, e.g. "Federal Tax Compliance Costs Climb to \$225," Tax Features, Tax Foundation, March 1996. See also, March 20, 1996. For a larger estimate, see James L. Payne, Costly Returns, The Burden of the U.S. Tax System. (ICS Press, 1993). Testimony of James L. Payne, "Replacing the Federal Income Tax", Hearings before the Committee on Ways and Means, House of Representatives, June 6, 7 and 8, 1995, Serial 104-28, p. 183-187. Joe Slemrod (University of Michigan) has made smaller estimates.

<sup>73</sup> The annual Money magazine survey in which 50 accountants prepare a hypothetical middle class couple's tax return and come up with at least 45 different answers each year is a major indication that our tax system is simply unadministerable.

<sup>74</sup> GAO, Supra.

**Table 8**  
**Estimated Tax Gap by Source for 1981 and 1992, in Current Dollars<sup>75</sup>**  
**(Dollars in millions)**

Description	1981 tax gap amount	1992 tax gap amount
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Individual filers		
Wages and salaries	\$2,378	\$1,919
Interest	1,969	1,891
Dividends	2,075	2,142
State tax refund	127	102
Alimony	124	253
Capital gains	1,822	11,535
Form 4797	217	1,264
Pensions and annuities	456	144
Taxable unemployment	107	388
Farm income	2,350	1,909
Partnership income	2,755	2,246
Small business (S) corporation	912	729
Estates and trusts	49	73
Rents and royalties	2,012	4,481
Non-farm sole proprietors	18,714	30,173
Other income	4,366	3,465
Taxable Social Security	0	44
Adjustments to income	752	694
Deductions	3,540	3,889
Exemptions	1,844	2,224
Credits	1,313	1,274
Math errors	487	1,521
Individual non-filer tax gap	5,231	10,233
Individual remittance gap	8,300	11,400
=====		
Total individual tax gap	\$61,900	\$93,994
Small corporation tax gap	4,461	6,999
Large corporation tax gap	8,638	23,716
Unrelated business income gap	56	218
Fiduciary tax gap	111	202
Corporate remittance gap	800	2,000
=====		
Total corporate tax gap	\$14,065	\$33,135
-----		
Total tax gap	\$75,966	\$127,129

<sup>75</sup> Source: Income Tax Compliance Research, IRS Publication 1415. Gross Tax Gap Estimates by Source of Tax Gap for Tax Years 1981 and 1992, in 1992 Dollars, reprinted in GAO Supra.

### C. The FairTax Will Improve Compliance At Lower Social Costs

A sales tax is likely to reduce rather than exacerbate the problem of tax evasion. The increased fairness, transparency and legitimacy of the system will induce more compliance. The roughly 90 percent reduction in filers will enable tax administrators to more narrowly and effectively address non-compliance and increase the likelihood that tax evasion will be uncovered. The relative simplicity of a sales tax will promote compliance. Businesses will need to answer one question to determine the tax due: how much was sold to consumers? Finally, the dramatic reduction in marginal tax rates will reduce the gains from tax evasion. If the cost of non-compliance remains comparable (or even increases due to the increased likelihood of getting caught caused by the much smaller number of filers), then the expected profit from tax evasion will decline and the magnitude of tax evasion will decline.

Some of the problems regarding the underground economy that exist under the income tax would remain under a sales tax, particularly those involving cash transactions made with the explicit intent of evading taxation or in the illegal economy. However, by almost all theories, the national FairTax would increase tax compliance while reducing compliance costs at the same time.

For instance, the marginal tax rates under the FairTax will be lower than the marginal tax rates for almost all non-employees. Therefore, the benefit from lawful tax avoidance or illegal tax evasion will be much less at the margin relative to either the present system<sup>76</sup> or competing alternative tax systems.<sup>77</sup> Research has validated the intuitive relationship between higher marginal tax rates and higher rates of evasion.<sup>78</sup> Lower marginal tax rates, all other things being equal, imply lower evasion because the benefit from evasion declines while the costs of evasion remain comparable.

If a retailer failed to report taxable sales, the government would lose and the evader would gain by an amount equal to the sales tax rate times the amount not reported. In an income tax, the government loses and the evader gains by an amount equal to the marginal income tax rate times the amount not reported. An income tax evader will see his taxable income go down dollar for dollar for every dollar not reported because the bar owner or plumber or other person that is

<sup>76</sup> For 1998, the 28 percent marginal rate is effective on taxable incomes of \$42,350 for joint filers and \$25,350 for single persons. The top federal tax rate, of course, is 39.6 percent.

<sup>77</sup> For a particular taxpayer, the marginal benefit from failing to report a given amount of gross receipts under an income tax and a given amount of gross receipts under a sales tax are the same. In an income tax, the taxpayer will reduce his taxable income one for each dollar not reported. In a sales tax, failing to report sales receipts would also reduce taxable receipts dollar for dollar. Although the problem of falsifying deductions or deducting personal items as a business expense does not arise in a sales tax, the corresponding problem in a sales tax is using a business to attempt to purchase personal goods and services on a tax-exempt basis.

<sup>78</sup> See, e.g. "Estimating the Underground Economy: A Critical Evaluation of the Monetary Approach", Peter S. Spiro, 42 Canadian Tax Journal 1059-1081 (1994); "The Underground Economy in the United States: Annual Estimates, 1930-80", Vito Tanzi, 30 International Monetary Fund Staff Papers 283-305 (June 1983).

cheating can be counted on to report some income and all of his expenses. Typically, failing to report a small fraction of a business' gross income will be sufficient to drive its reported profit to zero.

Second, a taxpayer's perception of the fairness of the system, is also a factor affecting propensity for evasion. Tax evasion will undoubtedly be a problem under any tax system. It is a major *and growing* problem under the current tax system, despite very substantial efforts and increasingly harsh treatment of the taxpaying public. This breeds disrespect for the tax system and makes a system based on taxpayer self-assessment increasingly less viable. As the costs of compliance shrink and the perceived fairness of the tax system increases, some of the hostility toward the tax system will decline. People who are in non-compliance because they perceive the present system as being unfair or illegitimate, or who want to get back at the IRS for a perceived or actual wrong may be more inclined to comply with a sales tax.

Thirdly, focusing the tax on retailers means enforcement resources can be directed at fewer collection points.

Much is made from the fact that a sales tax would place the responsibility for tax collection with the retailer, a sector of the economy in which small businesses are more represented. The JCT echoes this concern on page three of their letter. Small businesses are viewed as more likely to evade taxes since the owner, and beneficiary of tax evasion, is more likely to also be responsible for keeping the books and filing the tax returns. There is, of course, some truth to this proposition. In fact, sole proprietors are the largest single tax gap item today (at \$30.2 billion), accounting for about one-third of the individual tax gap.

A number of factors, however, reduce the importance of this consideration. For instance, those small business persons that are inclined to cheat on their sales tax are probably already cheating on their income tax and would be inclined to do so under any tax system. Also, the economic importance of small firms in the retail sector is usually grossly overstated. According to the JCT, the smallest firms where cheating is most likely only account for 14.9 percent of gross receipts by all retailers, wholesalers and service providers.<sup>79</sup> Since the gross receipts of wholesalers would not typically be subject to tax, the true scope of the small "problem" companies is smaller still. However, sole proprietorships, the most likely to evade tax under the present system and under a sales tax, are not included in the JCT figures.

**Table 9**  
**Share of Total Gross Receipt by Firms with less than \$1 million of Gross Receipts<sup>80</sup>**  
**(\$ millions, 1993)**

Industry	Entity Type	Firm Sales Under \$1 mil.	Firm Sales All Firms	Small Share Percent
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<sup>79</sup> IRS Statistics of Income, reported in "Impact on Small Business of Replacing the Federal Income Tax", Joint Committee on Taxation, April 23, 1996, JCS-3-96, pp. 109-127.

<sup>80</sup> Ibid.

Retail and Wholesales Trade Services	C Corp.	116,929	2,663,541	4.4%
Retail and Wholesales Trade Services	C Corp.	91,383	610,438	15.0
Retail and Wholesales Trade Services	S Corp.	358,566	959,501	37.4
Retail and Wholesales Trade Services	S Corp.	98,721	283,680	34.8
Retail and Wholesales Trade Services	Partnership	22,938	112,112	20.5
Retail and Wholesales Trade Services	Partnership	30,783	187,588	16.4
-----				
Total	Combined	719,319	4,816,860	14.9

What is perhaps more important, is this: the necessary corollary of the tax collection point being concentrated at retail establishments rather than with individuals or other businesses is the diminishment of collection points where revenue agents must concentrate their enforcement efforts. The collection points in a national FairTax system would be perhaps 9-11 percent of those under the current income tax system or other alternative tax systems.<sup>81</sup> Even assuming every business in America sold at retail and was required to file returns (or choose to do so to receive back sales tax on business inputs), no more than 18.1 million businesses would be required to file returns compared to over 154 million returns (of all types) filed today.<sup>82</sup>

Because the number of collection points is so much lower, if enforcement funding is held equal, then the audit rate for potential evaders would increase considerably and the likelihood of them being apprehended is correspondingly higher. In other words, the risk of detection would increase and the risk adjusted cost of evasion would increase. Increased evasion due to the greater concentration of small businesses in the retail sector would be outweighed by greater compliance due to greater simplicity and perceived legitimacy of the tax system, from reduced temptation due to lower marginal tax rates, and from the higher risk of detection due to a smaller taxpayer population.

In an income tax, anyone can cheat the system and a great many do so. Under a sales tax, only retailers would be in a position to cheat and the vast majority of retail sales are made by large firms that would be unlikely to cheat.

Fourth, the FairTax system is far more visible. Under a sales tax, cheating can be effected only one of two ways: either by collaborating with a purchaser (which is less likely) or by not paying over sales taxes. Under the income tax, cheating can be done in the privacy of one's home, on a tax return protected by section 6103 from anyone but the auditors who are statistically never likely to see it.

Fifth, there is the complication of the current system. Complication adds to the tax gap not only by adding to the number of confused taxpayers, and the number of gamblers who take advantage of unintended loopholes, but by giving cover to evaders, who can obfuscate their intentional defalcation under the guise of confusion. Businesses will need to answer one question to

<sup>81</sup> Supra, note 58.

<sup>82</sup> Derived from Internal Revenue Service, 1995 Data Book, Table 11, p. 12. 1994 data and SOI Bulletin, Spring 1997, Table 1. Corporations (2.5 million), partnerships (1.5 million), S corporations (2.0 million) and individuals filing schedule Cs (12.1 million).

determine the tax due: how much was sold to consumers? And there will be clarity in the line between compliance and cheating.

Under the FairTax, therefore, far fewer taxpayers, have far less motivation, far less opportunity, a better chance of getting caught and far less chances to evade taxes.

This theoretical proposition is borne out by state data, which show sales tax compliance is much higher than comparable income tax compliance, notwithstanding the Federal government's subsidization of state enforcement activities.

Two last points deserve mention. Some sales tax proponents argue that the sales tax will be better at capturing the underground economy than the income tax. This is based on a partial misconception. Take the case of a drug dealer. He does not pay income tax on his profit on his illegal business yet he would pay sales tax on the purchases he makes (e.g. a new BMW). His customers, however, must purchase their drugs from after-income-tax dollars. They would not, however, pay sales tax on the purchase of illegal drugs. In short, in either case, the government would lose tax revenue from illegal businesses. There may, however, be a revenue gain under a sales tax to the extent that the marginal income tax rate paid by drug users is less than the sales tax rate paid by drug dealers. There is some data to support this proposition, particularly given the normal reaction of the drug dealer to incur a misdemeanor by not reporting any income, not even legitimate income, as opposed to a 26 U.S.C. 7201 felony by misreporting income known to be false.

Last, even if evasion rates were higher under a sales tax, they would have to be much higher to justify, even from the narrow view of government revenue, the huge compliance costs incurred by business and deductible as a business expense. Moreover, if compliance proved to be a problem, information reporting along the lines of present law 1099s could be implemented to facilitate cross checking by government auditors. These 1099s would reflect the quantity of product sold to retailers. An auditor could then ensure that the retailer's books either reflected a sale of these products or that the products were in inventory. Both the Schaefer-Tauzin and AFFT FairTax plans require all businesses (including non-retailers) to keep business records kept in the ordinary course of business that would aid cross checking by government auditors. Even in VAT countries, however, such cross checking is rare in practice.<sup>83</sup>

#### **D. We Can Easily Overestimate the Problems Encountered in Enforcement by The Five States That Do Not Currently Have Sales Taxes**

Mr. Kies writes:

*The AFFT proposal would make businesses and states the collecting agents for the tax. Presently there are 5 states that do not collect general sales taxes; their initial collection efforts are likely to be less than 100 percent effective.*

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<sup>83</sup> Moreover, it is currently done by state governments, particularly with respect to use tax due on out-of-state purchases by businesses. State sales taxes often tax business inputs.



It is, of course, true that Alaska, Delaware, Montana, New Hampshire and Oregon do not presently have general sales taxes (although Alaska collects sales taxes at the county level). However, collectively these states have (using 1995 figures) 6.5 million residents and account for only 2 ½ percent of the U.S. population.<sup>84</sup> They also account for only 2.6 percent of the Gross Domestic Product. Granting, *arguendo*, that these states (or the federal government should these states choose not to administer the tax) would not be as effective as experienced state governments in administering the tax, the scope of this problem is smaller than if they did 10 percent worse than anticipated (which would constitute massive failure), federal revenues would suffer a temporary decline from the baseline of 2/10ths to 3/10ths of one percent. In addition, the AFFT plan allows these states (or the federal government) to contract with an experienced state government to administer their tax. For example, Oregon could contract with California to run its tax system. If they chose to do so, it is unlikely that revenues would decline at all.

It is also important to note that the AFFT plan does not make businesses tax collectors any more than they are under today's system; but rather, significantly reduces both the absolutely number and the scope of their responsibilities. Today the bulk of federal revenues are collected by businesses withholding income and payroll taxes from employees.

### **III. Economic Impact**

#### **A. The Effect of the Sales Tax on Asset Prices**

##### **1. The Consensus View**

Public finance economists, including the JCT economists, seem to commonly hold the view that if a consumption tax replaces the corporate and individual income tax, then the stock market will fall or even collapse.

“The consumption tax, depresses the purchasing power of the existing capital stock. Domestic equity holders suffer capital losses from consumption tax reform.”<sup>85</sup> (Hall, 1996). “For a company for which equity constitutes a fraction  $e$  of the value of the company's assets, the implied percentage decline in value of the shares would be  $t/e$ , where  $t$  is the value added tax rate. For sufficiently leveraged firm ( $e < t$ ), the transition incidence would imply bankruptcy.”<sup>86</sup> (Bradford, 1996a) “The effect of the Armev (Hall-Rabushka) tax should be a pronounced fall in the stock market, according to economic theory. ... In the case where there is no debt, that fall [in the stock market] should reflect the tax rate – if the rate is 20 percent, the stock market should fall by twenty percent. ... If equity constituted one half of the value [of the firm], then the asset should fall by 40 percent.”<sup>87</sup> (Gravelle, 1995) “The lump sum tax on old capital, which has yet to be clearly recognized in the political arena, will be played out in many ways. ... For the flat tax, it will likely show up, for most people, in a decline in the value of the stock market.”<sup>88</sup> (Slemrod, 1996). “The price of the existing capital stock will fall immediately because of

<sup>84</sup> Statistic Abstract of the United States.

<sup>85</sup> Hall, 1996, p. 76. Interestingly, in Hall and Rabushka, 1995, the prediction is made that the stock market will rise.

<sup>86</sup> Bradford, 1996, p. 136.

<sup>87</sup> Gravelle, 1995, pp. 10-11.

<sup>88</sup> Slemrod, 1996.

changes in the relative treatment of new and existing capital. ... "Because the NST/VAT, Hall-Rabushka and Armev-Shelby plans all include a larger cash-flow tax than that implicit in the current tax system, these plans all reduce the value of existing assets."<sup>89</sup> (Auerbach, 1996) Others who hold similar views include Sarkar and Zodrow, 1993, Zodrow, 1997, and Hubbard, 1997. See, Bradford, 1996b<sup>90</sup>, and Gale, Houser and Scholz, 1996<sup>91</sup> for more nuanced, although abbreviated, discussions.

In contrast, if we ask the typical entrepreneur, investment banker or the average man on the street what will happen to the stock market if both the tax on corporate profits and the individual income tax on the return to savings and investment is repealed and replaced with a consumption tax, they probably will have a rather different opinion. Indeed, it is doubtful that investment bankers would rush to short sell if a consumption tax were enacted.

These economists' argument in a nutshell is that existing companies own capital that cost X and the new tax regime, more favorable to capital, will reduce the cost of capital for new companies to Y where  $X > Y$ . The capital assets market will rapidly, if not instantaneously, clear. Since the services of both old and new capital are the same, old capital will, the argument goes, necessarily drop to the price of the new, lower cost capital. Since corporate stock is just a legal claim on a company's underlying physical assets and existing physical assets will drop in price, the stock market will drop from the old value X to the new value Y.

The bottom line conclusion is that the value  $V_1$  of the stock market after a consumption tax replaces the income tax will be lower than its initial value  $V_0$ . The value after the implementation of the consumption tax,  $V_1$ , falls by a fraction determined by the consumption tax rate  $v$ .

$$(1) \quad V_1 = (1-v)V_0.$$

Debt financing simply exacerbates the fall such that

$$(2) \quad V_1 = (1-v-f)V_0.^{92}$$

where  $f$  is the fraction of investment that is debt financed.

Introducing depreciating assets does not materially affect their analysis. If the consumption tax provides transition rules allowing the recovery of remaining tax basis in existing depreciable assets, the transition rules would reduce the magnitude of the postulated decline. But the view that the stock market would decline, which is based on the fact that new assets have a more favorable tax treatment than existing assets, would not change.<sup>93</sup>

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<sup>89</sup> Auerbach, 1996, p. 60.

<sup>90</sup> Bradford, 1996b, p. 25-29.

<sup>91</sup> Gale, Houser and Scholz, p. 302-305.

<sup>92</sup> See, e.g. Gravelle, 1995, pp. 20-21; Bradford, 1996, p. 136.

<sup>93</sup> If remaining basis was expensed in the first year and remaining basis was equal to the present discounted value of the assets' expected future income stream, then presumably the market would not fall. The remaining basis in corporate and partnership owned depreciable property, amortizable intangibles and inventory is \$4.8 trillion. If remaining basis were expensed, either federal revenues would decline precipitously or the rate of tax would need to climb dramatically. This severe drop in federal revenues could in principle be mitigated while still retaining

Henceforth, the view outlined above will be called the “consensus view.”

## 2. The True Impact of a National Sales Tax

The analyses cited above generally relate to the flat tax. Among adherents to the consensus view, the impact of a national sales tax is generally regarded to be the same as the flat tax by those who discuss the issue.<sup>94</sup> Their analysis, although perhaps not their conclusion, would need to be different, however, because a national sales tax would not tax the income flow generated by old or new assets and does not “expense” new capital investment since there is no income or cash flow tax base from which to deduct the capital cost. Stated somewhat differently, the flat tax and the income tax explicitly tax the rents generated by capital while the sales tax does not.<sup>95</sup> The flat tax effectively limits this taxation to rents used to fund consumption by expensing capital investment while the income tax interposes the tax wedge on all rents. A national sales tax, instead of imposing a tax wedge between gross and net of tax rents, imposes a wedge between gross and net prices in the consumption goods and services market.

A flat tax taxes rents of both existing (i.e. “old”) capital and new capital. A flat tax, however, would provide more generous capital cost recovery allowances to new capital. There is, therefore, an asymmetry in the tax treatment of existing capital and new investment. Under a sales tax, the rents of both existing and new capital are not taxed. The sales tax wedge between the sales tax-inclusive price that a consumer pays and what a producer receives affects goods and services produced by “old” and new capital equally. New capital investment does not receive a more favorable capital cost recovery allowance, since neither old nor new capital investment is afforded any deduction. Thus, unlike the flat tax, there is no asymmetry in the tax treatment of “old” and new capital

If, as is commonly done, the assumption is made that a sales tax is incident on consumers and, therefore, the after-tax return to the factors of production (including capital and labor) increases, it would seem that old capital fares well. In this scenario, the after-tax return that old assets earn is increased by the amount of the repealed income tax so that the pre-tax and after-tax return is the same. The capitalized value of the future income stream will increase since the after-tax income stream has increased.<sup>96</sup> Although, the tax-inclusive price of consumption-goods will have gone up, so will have the return, that factors earn. New capital investment would similarly see its pre-tax and after-tax return would be the same. Since new capital investment is not expensed in a sales tax, it therefore would not seem to have the competitive advantage of new

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expensing by providing deductions greater than remaining basis over time such that at some discount rate they had the present value equivalent of currently deducting remaining basis. This approach was used in the “Neutral Cost Recovery System” in the Kemp-Kasten tax reform plan in the mid-1980s.

<sup>94</sup> E.g., Hall, 1996, pp. 75-76 (“All the consumption taxes depress the price of existing capital”); see also Bradford, 1996b, p. 7. His transition analysis applies to a value added tax but “a consumption-based subtraction method value-added tax is fundamentally the same *economically* as a retail sales tax, even though it may look different ...”

<sup>95</sup> Rents here is used in the sense of rental price or returns to the owner of a form of capital and not in the sense of super-normal returns or quasi rents.

<sup>96</sup> Since the future income stream should be discounted by the after-tax discount rate which represents the opportunity cost of funds, this analysis implicitly assumes that pre-tax interest rates will fall under a consumption tax since the tax wedge or tax premium is removed. This is a widely held view. See, e.g. Golob, 1995, Hall and Rabushka, 1995, pp. 94-96, but see Feldstein, 1995. See also discussion below. If, however, the discount rate were to rise from its current after-tax level to the current pre-tax level, then the assets value would be constant.

capital over old capital that drives the decline in old asset prices in the consensus view. In both cases the relative price of money returns (or rents) to higher (by assumption) tax-inclusive prices is the same. It is not clear, then, why capital losses would occur.

If one adopts the alternative incidence assumption that a sales tax is borne by the factors of production in proportion to their output, then the pre-tax return under the income tax and the sales tax return to labor and capital will not be the same.<sup>97</sup> The return to the factors will decline by the sales tax rate such that the factor return under a sales tax,  $r$ , will be equal to  $(1-v)r$ , where  $r$  is the gross pre-tax rental price under the income tax and  $v$  is the sales tax rate. Note, however, that in this scenario the tax-inclusive price of consumption goods will not be higher than the price under the income tax. Thus, although the factor return is lower than the pre-tax return under the income tax, the after-tax return to factors (including new and old capital) will be comparable to the after-tax return those factors received under the income tax, except for differences in the after-tax return caused by changes in marginal tax rates.<sup>98</sup>

## **B. The Relative Importance of Physical and Intangible Capital**

A consumption tax would not cause the stock market to collapse. Not only is the magnitude of the stock market fall exaggerated by those holding the consensus view, the sign is wrong. This is particularly true with respect to a national sales tax by virtue of the fact it would not tax gross flows and the tax wedge interposed between the gross of tax price paid by consumers and the net of tax price received by firms would apply equally to all capital. The stock market will go up, not down.

Those holding the consensus view typically do not define “capital” but it seems clear that for purposes of their analysis capital means physical or reproducible capital. Physical capital could be defined as equipment, structures and inventory; it may also be viewed as including land. Land is not reproducible capital but even the value of land may be increased or decreased by improvements or neglect. The consensus view of capital would roughly corresponds to what the anglo-american legal tradition would call tangible personal property and real property owned by firms.

Because reproducible capital is physically deteriorating, the present discounted value of the future income stream it may be expected to generate is declining.<sup>99</sup> In more formal terms, the

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<sup>97</sup> Factor rental prices are a function of the return they will provide to the owners or, in the case of actual rental, renters of those factors. Since the sales tax imposes a tax wedge between the price of the good to the consumer and the price received by the producer, producers will not be receiving the full value of the products sold to consumers and the rent they can pay for factors and remain profitable will decline. This, however, assumes that the consumer demand function is held constant. Given repeal of the income tax (and in the AFFT plan the payroll tax as well), consumers will have more money income and the demand function in terms of money prices will presumably shift to the right to some very considerable degree.

<sup>98</sup> The marginal tax rate on capital (and average tax rate for that matter) will almost certainly be much lower under a sales tax or a flat tax than it is under current law. For an estimate of the current and historical average and marginal tax rates on various types of capital see Robbins and Robbins, 1995.

<sup>99</sup> Depreciation in value, however, is a function of the decline in the present value of an asset's future (after-tax) income stream not its physical state per se. Land is a special case. It is not viewed as depreciating in the traditional literature. This is largely true; however, land will decline in value to some degree if it is not cared for just as improving the land (by fertilizing it, for example) will increase (or maintain) its value. In addition, its rental price

rental or service price of physical assets will decline over time because the technical productivity of the capital will decline. Therefore, the market value of physical assets decline over time. The accounting profession requires that this fact be recognized in financial statements. Equipment and structures are carried on the books at original cost less a measure of depreciation. As often as not, firms use, for book purposes, straight line depreciation over some useful life.<sup>100</sup>

Perhaps the two most highly regarded empirical studies of economic depreciation are Hulten and Wykoff, 1981 and Jorgenson and Sullivan, 1981. They reached the conclusion that geometrical decay is, empirically speaking, a reasonable approximation of economic depreciation for equipment and structures. Economic depreciation may be defined as the decline in the present discounted value of an asset's future income stream over time. In any event, book depreciation used on financial statements is unlikely to be more accelerated than economic depreciation. It is possible, then, that book depreciation may tend to somewhat *overstate* the value of physical assets. In the case of older real property, however, book depreciation will tend to dramatically *understate* the value of the property because of the high inflation rates during the 1970s. It is not clear then whether the book value of physical assets owned by firms is systematically higher or lower than the economic or fair market value of those assets. However, except in firms for which pre-1982 real estate is a large portion of their total assets, the book value of physical assets may be viewed as a realistic upper bound on the economic value of those assets (or at least a reasonable rough approximation).<sup>101</sup>

But what is the ratio of the value of physical capital to the overall value of the firm? In principle, the value of the firm as reflected in the market price of its stock is a function of the present discounted value of the future (after-tax) income it will generate. If we take book value as the upper bound of the value of depreciating physical capital, we may determine the ratio of physical capital to market value.

An unscientific perusal of the balance sheets of a number of major corporations would show that for most of these firms, physical capital is a small percentage of most companies' overall value. See also discussion below, Table 10.

Let us take the stock market valuation of a firm  $V_{\text{firm}}$  as the capitalized value of its expected future after-tax income stream

$$(8) \quad V_{\text{firm}} = f \left( \sum_{t=0}^{\infty} Y_t(1-u)/(1+R)^t, X \right)$$

where  $Y_t$  is the firms' expected income in period  $t$ ,  $R$  is the after-tax discount rate and  $X$  represents other factors such as variance in the expected future income stream (risk). The firm's income in period  $t$  is a function of the rents generated by both its physical capital  $K^P$  and its other, intangible capital  $K^I$  during period  $t$ .

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will change for other reasons. Raw land may become a more or less attractive place to build a plant or a home for a host of different reasons.

<sup>100</sup>They may use a more accelerated declining balance method switching to straight, sum of the years digits or some other method.

<sup>101</sup> 1982, because in that year the inflation rate as measured by the CPI dropped to 3.8 percent and has stayed at a relatively moderate rate ever since.

$$(9) \quad Y_t = f(K_t^p, K_t^i)$$

Given equations (8) and (9), the value of the firm is a function of the value of both its physical capital and its intangible capital and other factors.

$$(10) \quad V_{\text{firm}} = g(K_t^p, K_t^i, X)$$

The value of any capital is emphatically not related to the cost of production of the capital good. Capital goods have value only to the degree that they produce valuable services. It may have been very expensive to build a factory making buggies but when the automobile came around that capital which was specific to making buggies lost value. Capital that is specific to making lava lamps has declined in value since the services that capital renders is of little value today (despite a resurgence of the retro-1970s). Capital that is specific to making 286 motherboards is of little or no value now. The large factories built in the former COMECON countries were undoubtedly very costly to build, but are virtually worthless today because the services the capital provides is not valuable. Research expenditures may produce valuable technology but the value of the technology is unrelated to the cost of its development. Capital values are forward looking not backward looking.

New physical capital will have higher after-tax rents due to expensing in the case of the flat tax. Thus, all other things being equal, new physical capital will be more valuable than old capital since the *after-tax* rents of new capital will be higher. Nevertheless, old physical capital may see, on balance, its after-tax return stay comparable or even increase if the reduction in marginal tax rates and the elimination of the double taxation of corporate source income is enough to compensate for the loss of capital cost recovery deductions. If “reasonable” transition capital cost recovery allowances are provided, then most firms will see the after-tax return to old capital increase. Thus firm value attributable to old physical capital may go up. Firms with new capital may go up even more. The equilibrium asset price, even of old physical capital, may go up rather than down. Capital will be supplied (investment) until marginal cost of producing capital goods equals their value. The value of capital is a function of discounted future rents. For physical capital, the intersection of the marginal cost curve for producers’ durables and demand for producers’ durables (a function of value) yield investment equilibrium.

For a period there will be a disequilibrium where the present discounted value of expected future income streams generated by capital assets will be greater than the cost of producing producer durables. This disequilibrium is why the capital stock will grow.

#### **D. The Importance of Intangible Capital in Modern Markets**

Few really think that Microsoft’s market capitalization is a function of the buildings, chairs and computers that it owns. Yet that is precisely the proposition on which the consensus view rests. Physical capital accounts for only a small portion of Microsoft’s total capital. The analysis of the consensus view predicting a stock market collapse implicitly assumes that physical capital ( $K^p$ ) accounts for 100 percent of firms’ capital and that  $K^i$  is equal to zero. This is one of the central reasons for their mistaken analysis.

What is this other capital? It includes intellectual property and know-how. Some of this is protected by patents or copyrights. But the bulk of it is probably ordinary proprietary information possessed by the firm. Some of it is the institutional memory of the long-term employees of the firm that know how to effectively make, distribute and sell the company's products and some of it is the organization, production and marketing skill of the management. It may include a developed distribution system. Much of this is what appraisers would call "going concern value," a concept that includes all of these and what could be called customer base intangibles.

Although neglected by the public finance economists, the importance of intangible capital has not been lost on economists that analyze financial markets. Benjamin Friedman wrote, "Equity shares are composite capital assets not only in the sense that each business firm typically owns a variety of different kinds of physical capital but also because the value of most firms consists in part of intangible capital in the form of existing knowledge, organization and reputation. In the context of what are often very large costs of establishing new enterprises, together with highly imperfect secondary markets for physical capital assets, even in principle the prices of equity securities need not correspond in any direct way to the liquidation value of a firm's separate items of plant and equipment. Given transactions costs and imperfect secondary markets, the existing enterprise itself is as much an aspect of an advanced economy's long-lived production technology as is the sheer physical durability of capital."<sup>102</sup>

In 1995, NIPA figures show the net stock of non-residential fixed private capital was \$7,953 billion, of which \$5,948 was corporate.<sup>103</sup> IRS Statistics of Income put gross depreciable property owned by corporations in 1995 at \$5,582 billion and net of depreciation depreciable property at only \$2,606 billion.<sup>104</sup> Thus, the IRS figures are less than one-half of the NIPA figures. Net private non-residential fixed investment was \$222.9 billion.<sup>105</sup> This implies that the non-residential fixed private capital was \$8,176 billion at the end of 1996. Corporate equities at the end of 1995 were worth \$9,273.<sup>106</sup>

In 1995, there were 5,112 companies listed by NASDAQ and 2,675 listed on the New York stock exchange for a total of 7,787.<sup>107</sup> There were other firms publicly traded on the American Stock Exchange and over-the-counter off NASDAQ. According to SOI, in 1994, 7,043 firms had assets over \$250 billion and 6,899 had assets over \$100 billion. Assuming that all of the firms with assets over \$250 billion and half of the firms with assets over \$100 billion are publicly listed, this would imply 10,493 listed firms or 2,706 more than are listed on the New York or NASDAQ exchanges. These listed firms account for roughly 69 percent of the value of the depreciable property (net) owned by all corporations.<sup>108</sup>

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<sup>102</sup> Benjamin Friedman, 1989, p. 77.

<sup>103</sup> Katz and Herman, 1997, Table 7, p. 87.

<sup>104</sup> SOI Bulletin, Summer, 1997, Table 13, p. 149.

<sup>105</sup> National Income Product Accounts Table 5.2, Survey of Current Business, August, 1997, p. 84.

<sup>106</sup> Flow of Funds Accounts of the United States, Annual Flows and Outstandings, 1991-1996, June 13, 1997, Table L.213, (Washington: Board of Governors of the Federal Reserve System, 1997).

<sup>107</sup> Statistical Abstract of the United States, 1996, Tables 811, 812, p. 525.

<sup>108</sup> SOI Bulletin, Summer 1997, Corporation Income Tax Returns, 1994, Table 2, p. 69. Assets >\$250 billion (\$1,626 billion), assets >\$100 billion (\$100.7 billion), half of firms with assets >\$100 billion (\$50.4 billion). Thus, listed firms account for about \$1,676 billion of depreciable property. Total corporations depreciable property is \$2,438 billion. Thus, listed firms account for about 69 percent of corporate-owned depreciable property.

Of the \$8,176 billion in non-residential fixed private capital, therefore, roughly \$2,535 billion was owned by firms that are not publicly traded. Publicly traded firms accounted for about \$5,641 billion of the non-residential fixed private capital.

**Table 10**  
**Fixed Investment and Stock Market Value**  
**1996 (\$ billions)**

Total Non-Residential Fixed Private Capital Firms <sup>109</sup>	Non-Residential Fixed Private Capital Owned By Public Firms (est.)	Total Market Value of Public Firms' Equities	Debt of Public
\$8,176	\$5,641	\$9,273	\$3,732

Thus, the ratio of the value of public corporate equities to non-residential fixed investment (reproducible capital) owned by those firms is approximately 164 percent ( $\$9,273/\$5,641$ ). The market value of all financial claims on publicly traded firms is approximately 231 percent ( $(\$9,273+\$3,732)/\$5,641$ ).

Thus, corporate stocks have a value that is more than one and one-half the value of the equipment and structures they own. If the total value of financial claims on those firms is used, as would be appropriate in an investment analysis using Tobin's q for example, then the ratio would be nearly 2 ½ times the value of the reproducible (depreciable) property owned. The reason for these disparity is that the value of firms is not simply a function of the physical capital they own.

<sup>109</sup> Bonds outstanding were \$1,399 for non-financial corporations, \$1,313 billion in the financial sector for a total of \$2,712 billion. Flow of Funds Accounts of the United States, op. cit., Table L.212. Corporate bonds are almost exclusively issued by public corporations. Commercial paper \$779 billion. Table L.208. Bank loans corporate business \$638 billion. Table L.215. Assuming all bonds, 90 percent of commercial paper and 50 percent of bank loans are liabilities of publicly owned companies, the total debt of publicly owned companies is \$ billion.



The figures presented here are admittedly rough. However, these ratios would be higher still if today's stock prices were used instead of the values as of the end of 1996. Furthermore, the ratios would be over twice as high if IRS SOI corporate data was used instead of NIPA figures. These figures establish that the assumption made by the consensus view that physical capital and stock market value are the same is highly doubtful.

### **E. Time Lapse Before New Entrants Can Effectively Compete**

The consensus view implicitly assumes that a new firm with lower capital costs  $Y$  can immediately start competing with the existing firms with capital costs  $X$  where  $X > Y$ . But even if an entrepreneur had the money, he cannot start competing with Ford tomorrow. It would take time to build a staff, develop the technology, build the plants, perfect the quality control protocols, develop a marketing plan, build a dealership network and the like. In the real world these things take time (and money). The amount of time, of course, depends on the various constraints imposed by the market in question and the physical world. But in many fields it would be many years until the aspiring new entrant could gear up to compete. In the meantime, Ford would have been investing at the new capital cost  $Y$ . There is, probably, more often than not a longer period before new entrants can effectively compete in capital intensive industries. And it is in these capital intensive industries where any advantage accruing to new entrants from new capital is greatest. In short, although the consensus view assumes that a new equilibrium is achieved instantaneously or at least very quickly, in the real world it takes time and in many cases years.

### **F. The Competitive Advantages of Existing Firms**

Businesses do not invest only in physical assets. They invest in research to develop new technologies and new products that better meet customer wants and needs. They invest in market research to better learn what the consuming public wants and need. They invest, often heavily, in creating a loyal customer base. They invest in management systems and in their employees. They invest in marketing and distribution systems. The change to a consumption tax will provide new entrants no advantages with respect to these types of investments. Existing firms already possess this intangible capital and will have deducted most, if not all, of these costs.<sup>110</sup> New entrants, however, will need to make the investment in this kind of capital to effectively compete.

The consensus view assumes that there are no barriers to entry *and* that the new firm's capital will generate the same revenue as existing firms' physical and intangible capital. Although commonly made by general equilibrium theorists and even more commonly made among computable general equilibrium model builders, neither of these assumptions is warranted.

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<sup>110</sup> Most of these costs will have been deducted as ordinary and necessary business costs (i.e. expensed).

There are many barriers to new firms entering a market. Among them are returns to scale, technological and intellectual property advantages and marketing arrangements. Most important, however, is what could be called customer base intangibles.

Faced with a choice between buying an apparently identical car from Ford or from some brand new company at the same price, most people will go with the company they know. People will not want to be the first to buy a lemon. The reasons for this are sound. Lack of information about the new company and its products increases the risk and perceived cost of acquiring its products. Acquiring information about the new company and its products in an attempt to reduce that risk is time consuming and expensive. In fact, it is virtually impossible to tell whether the new company's car will be reliable, whether the quality of the product is good, whether they have acceptable customer service, whether they will honor their warranty and the like since the new company has no track record. Ford has spent years and a great deal of money developing a reputation. People have owned Fords and are familiar with what they can expect from Ford. In many, if not most cases, they are satisfied. Conveying information inexpensively about a product's attributes is one of the primary reasons why brand names exist in a modern market.

So the new company will have to compete with Ford by offering its goods at a lower price. Its "new" assets will *not* earn the same rate of return as Ford's "old" assets even though the assets may be technically identical. The income stream assumed to be identical in the economists' equations will not be the same for the same asset owned by Ford as for the new company. It will take many years for the new company to gain a reasonable market share and to overcome the lack of information and reputation. In the meantime, it will be earning a relatively low rate of return on its assets.

Many economists would say that this means that established firms are earning economic rents – using the term rents in the sense of returns above the market or equilibrium rate -- because of their intellectual property or because of barriers to entry. To some extent, they may be. But these economists are generally taking too narrow a view of capital. Capital is best viewed as anything that gives rise to rents in the more usual sense of having a rental price or providing a return over time and not as merely as physical or reproducible capital.<sup>111</sup>

#### **E. Consumption Taxes Reduce the Tax Burden on Both Old and New Capital whether Physical or Intangible**

The view that the stock market will fall is predicated on the relative tax advantage that new physical capital will enjoy compared to old physical capital. Under any proposed consumption tax, the average and marginal tax rate on capital income generated by both most old and all new assets will go down substantially compared to present law. Capital gains taxes will be repealed as will the tax on dividends and interest. The double taxation of corporate income will be removed. The estate and gift tax will be repealed. Unlike the flat tax, under a national sales tax even the cash flow (whether generated by old or new capital) of businesses will be free of tax.<sup>112</sup>

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<sup>111</sup> See, e.g. Fetter, 1930.

<sup>112</sup> Gross returns will go down to the extent that the sales tax proves to be incident on the factors of production, including capital. The purchasing power of the gross returns will go down to the extent that the tax proves to be incident on consumption.

Given these dramatic reductions in the marginal tax rate borne by capital income and the limited role of physical capital in the generation of that income,<sup>113</sup> it is not plausible to argue that the future after-tax income stream of most existing corporations will suffer. In fact, they will increase. However, not only corporate taxation is relevant to this analysis, the taxation of shareholders is relevant as well.

The sales tax repeals the tax on capital gains and on dividends. Ownership of stock provides its owner with a claim not just on the physical assets owned by a firm but on the higher future after-tax income stream the owners of corporate stock will enjoy under a national sales tax or flat tax. The higher income to owners of stock will lead to higher stock prices as the higher after-tax returns are capitalized.<sup>114</sup>

## **F. Interest Rates and Capital Values**

Interest rates are likely to fall immediately and quickly toward the current tax-exempt rate under tax reform. Investors will no longer need to charge a tax premium to achieve a particular after-tax rate of return. The impact of elimination of the tax wedge or tax premium on interest can be seen everyday in the *Wall Street Journal*. Tax-exempt municipal bonds tend to yield about 30 percent less than taxable corporate bonds of similar term and risk.

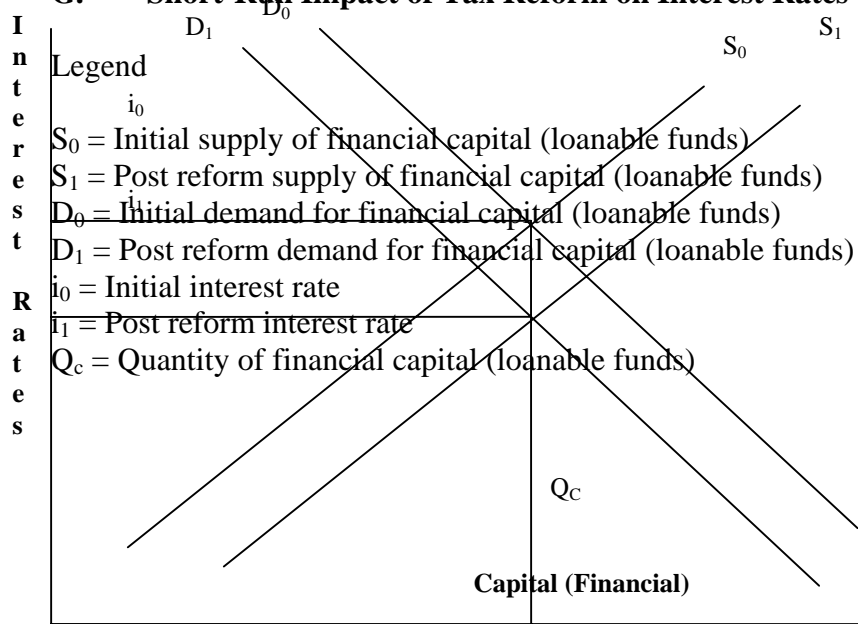
As shown in the figure below, since interest would not be deductible, the demand curve for loans will shift to the left. For any particular interest rate, fewer loans will be demanded since the cost of paying a particular interest rate will have increased. Conversely, since interest is no longer taxable, the supply curve for loans will shift right. At any particular interest rate, the supply of loan capital will be higher since the after-tax return will have increased. In the short run, assuming that the marginal tax rates of borrowers and lenders are comparable, market equilibrium will be achieved at a lower interest rate ( $i_1$ ) and the same amount of capital will be supplied.

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<sup>113</sup> And therefore to the overall valuation of a firm.

<sup>114</sup> As the stock price increases, of course, the yield will fall.

**G. Short-Run Impact of Tax Reform on Interest Rates**



A borrower will not be able to deduct interest but will pay a lower interest rate. A lender will receive a lower interest rate but will not pay taxes on his interest income.

Future income streams are properly discounted by the after-tax interest rate which represents the opportunity cost of the invested capital. The after-tax discount rate will be comparable before and after tax reform but the pre-tax rate will fall considerably. Thus, the capitalized value of a *given* after-tax income stream will not change appreciably. If, however, the after-tax income stream increases, then the capitalized value of that income stream will increase.

Another way of looking at this issue is to note that tax reform will not alter people's time preference. Thus, when the market adjusts to the change in tax treatment of interest, the rate will go down since a lower gross return will be required to induce people to save and lend. The after-tax rate of return on new investment has proved reasonably stable during the past 40 years despite major changes in tax treatment.<sup>115</sup>

## **H. Economic Growth and Corporate Profits Will Increase**

In addition, corporate profits will grow because of the effect that consumption taxes will have on economic growth. In a larger, growing and dynamic economy, corporate profits improve. Replacing the income tax with a consumption tax is almost universally regarded as having a positive impact on economic growth, although the magnitude of the impact is hotly disputed. The magnitude of this effect may be quite large or it may be modest but the fact that the economy will grow more rapidly is almost universally accepted.

Economic growth could have a pronounced impact on stock market values. If economic growth were to increase corporate profits by one percent per year for the next twenty years over the baseline, then corporate stock values could be expected to increase at least 34 percent immediately. If economic growth were to increase corporate profits by two percent per year for the next twenty years, then corporate stock values could be expected to increase at least 74 percent immediately.<sup>116</sup>

## **I. The Implications of Diminishing Returns to Investment for New Entrants**

The typical analysis by proponents of the consensus view assumes constant marginal returns to capital. A diminishing marginal return to capital, however, implies that new capital investment won't get the same gross return as old capital.

It seems probable that the diminishing marginal returns to capital hypothesis is correct, at least for large incremental investments. Accordingly, large "new capital" investments will earn a lower marginal return than "old capital" was earning. If we abstract away from all of the issues discussed above, the marginal rate of return on "old capital" would fall as well. But in the real world, established firms have a large advantage and this diminished return would be more acutely felt by new entrants, most notably by making investment in new entrants less attractive

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<sup>115</sup> See Robbins and Robbins, 1996.

<sup>116</sup> Both of these calculations assume an (after-tax) discount rate of three percent. Assuming a discount rate of six percent changes the figures to 17 and 36 percent, respectively.

to prospective investors.<sup>117</sup> The diminishing marginal returns to capital hypothesis can be understood when you think about what would happen to the profitability of investments in car companies if the automobile manufacturing capacity was increased by 25 percent because a host of new entrants rush into the car manufacturing business to take advantage of the new lower capital costs. It is unlikely that the return on automobile plants will remain as high as it is today.

There is an additional consideration. The massive influx on new investment dollars that is implied by the consensus view must come from somewhere. New entrants will be forced to bid in the capital market for investment dollars against established firms. It is likely that investors will demand a substantial risk premium from new entrants. If, as is seems likely, this is the case then new entrants' costs will be higher than the costs of established firms. This, in turn, will reduce the returns to new entrants, both obviating their tax advantage under flat tax expensing and, by reducing the return on investment in new entrants making it less likely that the new entry will occur in the first place.

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<sup>117</sup> Note that the lower return to old and new capital only occurs if "new" investment is made.

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