

# Issue Brief for Congress

Received through the CRS Web

## Value-Added Tax as a New Revenue Source

Updated May 1, 2003

James M. Bickley  
Government and Finance Division

# **CONTENTS**

SUMMARY

MOST RECENT DEVELOPMENTS

BACKGROUND AND ANALYSIS

Revenue Yield

International Comparison of Composition of Taxes

Vertical Equity

Neutrality

Inflation

Balance-of-Trade

National Saving

Administrative Cost

Intergovernmental Relations

Size of Government

LEGISLATION

FOR ADDITIONAL READING

CRS Products

## Value-Added Tax as a New Revenue Source

### SUMMARY

Some Members of Congress have expressed interest in the feasibility of using a value-added tax (VAT) to either replace all or part of the income tax, finance health care reform, or to fund America's war effort. A VAT is imposed at all levels of production on the differences between firms' sales and their purchases from all other firms. Policymakers may be interested in the following aspects of a VAT: revenue yield, international comparison of composition of taxes, vertical equity, neutrality, inflation, balance-of-trade, national saving, administrative cost, intergovernmental relations, size of government, and public opinion.

For FY2000 a broad-based VAT would have raised net revenue of approximately \$37.8 billion for each 1% levied. Most other developed nations rely more for revenue on broad-based consumption taxes than does the United States. A VAT is shifted onto consumers and, consequently, is regressive because lower-income households spend a greater proportion of their incomes on consumption than higher-income households. This regression could be reduced or even eliminated by any of three methods: a refundable credit against income tax liability for VAT paid, allocation of some of VAT revenue for increased welfare spending, or selective exclusion of some goods from taxation.

From an economic perspective, a major revenue source is better the greater its neutrality, that is, the less the tax alters economic decisions. A VAT is a relatively, but not com-

pletely, neutral tax. A VAT cannot be levied on all goods; consequently, a VAT would raise the prices of taxed goods relative to untaxed goods. This change in relative prices would distort households' choices among goods. A VAT cannot be levied on leisure; consequently, a VAT would affect households' decisions concerning work versus leisure.

The imposition of a VAT would cause a one-time increase in this country's price level. But a VAT would not affect this country's future rate of inflation if the Federal Reserve offset the contractionary effects of a VAT with a more expansionary monetary policy. If the United States continued its policy of flexible exchange rates, then the imposition of a VAT would not significantly affect the U.S. balance-of-trade. There is no conclusive evidence that a VAT would increase the rate of national saving more than another type of major tax increase.

The high revenue yield from a VAT would cause administrative costs to be low measured as a percentage of revenue yield. A federal VAT would encroach on the primary source of state revenue, the sales tax. But precedents exist for the federal government to levy a tax that some states have already imposed. A federal-state VAT could be collected jointly, but a state would lose some of its fiscal discretion. The hypothesis that a federal VAT would increase the size of the U.S. government has not been proven empirically.

## **MOST RECENT DEVELOPMENTS**

On April 11, 2003, Representative Michael Burgess introduced the Freedom Flat Tax Act, H.R. 1783. This act would allow individuals to elect irrevocably to pay a flat tax as an alternative to our current income tax. Also, individuals engaged in business activities could elect irrevocably, as an alternative to our current income tax system, to be taxed on business taxable income that equals gross sales less the cost of business inputs for business activity, wages, and retirement contributions.

## **BACKGROUND AND ANALYSIS**

Proposals to replace all or part of the income tax system with a consumption tax and proposals for national health care have caused Members of Congress to consider different tax options that would yield large amounts of revenue. The value-added tax (VAT), a broad-based consumption tax, is the subject of congressional interest.

The value-added of a firm is the difference between that firm's sales and its purchases from all other firms. A VAT is levied on firms' value added at all stages of production. For FY2000, a VAT imposed on most goods and services could have raised a net revenue of approximately \$37.8 billion for each 1% rate levied.

Aspects of a VAT that often raise interest or concern include revenue yield, international comparison of composition of taxes, administrative cost, vertical equity, neutrality, inflation, balance-of-trade, national saving, administrative cost, intergovernmental relations, and size of government. This issue brief considers the experiences of the 28 nations (out of 29 nations) with VATs in the Organization for Economic Cooperation and Development (OECD) relevant to the feasibility and operation of a possible U.S. VAT. The OECD consists of 21 European nations, Turkey, the United States, Canada, Australia, New Zealand, Japan, Mexico, and South Korea.

### **Revenue Yield**

The primary reason for considering a VAT for financing health care reform or replacing all or part of our income tax system is its enormous revenue potential. Economists and public officials use the operating assumption that a VAT would be fully shifted to final consumers in the form of higher prices of goods. A VAT (or any other major tax increase) would have a contractionary effect on the economy unless offset by other economic policies. Consequently, the revenue estimates in this issue brief are made under the assumption that the Federal Reserve would use an expansionary monetary policy to neutralize the contractionary effects of a VAT. These revenue estimates also do not take into account the possible shifts in consumption patterns that might be expected if some items are taxed and others are excluded from taxation.

The potential revenue per 1.0% rate from a VAT would vary with the comprehensiveness of the tax base. A broad-based VAT would have limited exclusions, while a narrow-based VAT would have numerous exclusions. Obviously, the broader the tax base, the lower the tax rate necessary to raise a given amount of revenue. Furthermore, the broader the VAT base, the more efficient the tax system. For fiscal year 2000, each 1.0% rate for a VAT could have raised net revenue of approximately \$37.8 billion with a broad base and net revenue of approximately \$20.0 billion with a narrow base.

## **International Comparison of Composition of Taxes**

One argument frequently made for a U.S. VAT is the relative reliance on consumption taxes in other developed countries. Most other developed nations do rely more on consumption taxes. For 2000, for taxes on general consumption (e.g., VATs and sales taxes), the United States had a lower reliance (7.5%) of total tax revenues than any other OECD nation. Also for 2000, the United States' (federal, state, and local governments) general consumption taxes as a percentage of gross domestic product (2.2%) were lower than any other nation in the OECD.

## **Vertical Equity**

The vertical equity of a tax concerns the tax treatment of households with different abilities-to-pay. Vertical equity may be affected by the measure of ability-to-pay and the tax period. Some economists argue that personal consumption is the best measure of ability-to-pay because consumption is the actual taking of scarce resources from the economic system. The most common measure of ability-to-pay is still income. Proponents of income as a measure of ability-to-pay argue that saving yields utility by providing households with greater economic security.

Tax incidence usually is measured by using a one-year period. Data on consumption and income are readily available in one-year increments and the concept of a one-year period is easily understood. But some tax economists believe tax incidence is more accurately determined by measuring consumption and income over a household's lifetime.

If consumption is used as a measure of ability-to-pay, a single-rate VAT with a broad base would be approximately proportional regardless of the time period. In other words, the percentage of consumption paid in VAT by households would be approximately constant as the level of household consumption rises.

If disposable income over a one-year period is the measure of ability-to-pay then a VAT would be viewed as extremely regressive; that is, the percentage of disposable income paid in VAT would decrease rapidly as disposable income increases. In most discussions of tax policy, both a one-year period and annual disposable income (or some other annual income measure) are used; consequently, the VAT is viewed as being extremely regressive.

If disposable income over a lifetime is the measure of ability-to-pay, a VAT would be mildly regressive. For lower and middle income households, it appears that nearly all

savings are eventually consumed. Thus, it may be that for the vast majority of households, lifetime consumption and lifetime income are approximately equal. High income households tend to have net savings over their lifetimes; consequently, they would pay a lower proportion of their disposable incomes in VAT than lower income groups.

Some supporters of progressive taxation oppose the VAT primarily because they believe that it is regressive. Some of these critics are especially concerned about the absolute burden of a VAT on low income households. The degree of regressivity, however, can be reduced by government policy. Three often-mentioned policies are exclusions and multiple rates, income tax credits, and earmarking of some revenues for increased social spending (including indexed transfer payments).

## Neutrality

From an economic perspective, the greater a source of revenue's neutrality, the more it is generally preferred; that is, the less it affects economic decisions. Conceptually, a VAT on all consumption expenditures with a single rate that is constant over time would be relatively neutral compared to other major revenue sources.

For households, two out of three major decisions would not be altered by this hypothetical VAT. First, this VAT would not alter choices among goods because all goods would be taxed at the same rate. Thus, relative prices would not change. Second, a VAT would not affect the saving-consumption decision because saving would only be taxed once; that is, when savings are spent on consumption. But the third decision, a household's work-leisure decision, would be affected by a VAT. Leisure would not be taxed, but the returns from work would be taxed when spent on goods. (In contrast, the income tax affects both the saving-consumption decision and the work-leisure decision.)

For a firm, the VAT would not affect decisions concerning method of financing (debt or equity), choice among inputs (unless some suppliers are exempt or zero-rated), type of business organization (corporation, partnership, or sole proprietorship), and goods to produce. Other types of taxes may affect one or more of these types of decisions.

But this conceptually pure form of a VAT is not feasible. A VAT cannot be levied on all consumer goods; consequently, prices of taxed goods will rise relative to untaxed goods. This change in relative prices would affect consumers' decisions about which goods to purchase, and, consequently, firms' decisions about which goods to produce. Furthermore, most nations with VATs have more than one rate. Multiple VAT rates alter relative prices of taxed goods. Finally, VAT rates in most nations have tended to rise over time. Despite these deviations from a pure form of VAT, a broad-based VAT is relatively neutral. This neutrality is greater if the tax rate is relatively low, as could be the case for a VAT to reduce the U.S. deficit.

## **Inflation**

A VAT initially would cause a one-time increase in the price level if the Federal Reserve had an expansionary monetary policy to offset the contractionary effects of the tax. For example, a 4% VAT on 75% of consumer outlays might cause an estimated increase in consumer prices of approximately 3%.

A VAT would have some secondary price effects. Some goods would rise in price because their factors of production, especially labor, are linked to price indexes. Yet, if the Federal Reserve disregarded these secondary price increases in formulating monetary policy, these secondary price increases would tend to be offset by price reductions in other sectors of the economy. In summary, a VAT would probably cause a one-time increase in the price level but not affect the rate of inflation, i.e., increased prices in the future.

## **Balance-of-Trade**

Currently, all nations with VATs zero-rate exports and impose their VATs on imports. This procedure for taxing trade flows is referred to as the destination principle because a commodity is taxed at the location of consumption rather than production. The destination principle creates a level playing field because imported commodities rise in price by the percentage of the VAT, but exported commodities do not increase in price. For a particular nation, the VAT rate on domestically produced and consumed products would be the same. The VAT rate on a particular good would vary among nations.

With flexible exchange rates, the supply and demand for different currencies determine their relative value. If a country has a deficit in its balance-of-trade, this deficit must be financed by a net importation of foreign capital. But net capital inflows cannot continue indefinitely. Thus, over time, this country's currency will tend to decline in value relative to the currencies of other nations. Consequently, this country's balance-of-trade deficit will eventually decline as its exports rise and imports fall. Hence, economic theory indicated that a VAT offers no advantage over other major taxes in reducing a deficit in the balance-of-trade.

## **National Saving**

If a VAT is levied to replace part of income tax revenue, what would be the effect on the personal saving rate. A VAT taxes savings when they are spent on consumption, allowing savings to compound at a pre-tax rate. But an income tax is levied on all income at the time it is earned, regardless of whether the income is consumed or saved. The income tax is also levied on the earnings from income saved. Consequently, some proponents of the VAT have argued that choosing a VAT rather than an income tax to raise revenue would increase the return from saving, and, consequently, raise the savings rate.

The rate of return on savings, however, has never been shown to have a significant effect on the savings rate because of two conflicting effects. First, each dollar saved today results in the possibility of a higher amount of consumption in the future. This relative

increase in the return from saving causes a household to want to substitute saving for consumption out of current income (substitution effect). But a higher rate of return on savings raises a household's income; consequently, the household has to save less to accumulate some target amount of savings in the future (income effect). Thus, this income effect encourages households to have higher current consumption and lower current saving. In summary, there is no conclusive evidence that a VAT would increase the rate of national saving more than another type of major tax increase.

## **Administrative Cost**

The value-added tax would require the expansion of the Internal Revenue Service. But the high revenue yield from a VAT could cause administrative costs to be low measured as a percentage of revenue yield. The administrative expense per dollar of VAT collected would vary with the degree of complexity of the VAT, the amount of revenue raised, the national attitude towards tax compliance, and the level of the small business exemption. Proposed VATs for deficit reduction usually are estimated to yield approximately \$100 billion per fiscal year which would result in the spreading of administrative costs. In 1984, officials at the U.S. Treasury estimated that a completely phased in VAT would require additional staff of 20,694 at a cost of \$700 million or approximately \$1 billion at 1991 salary levels. For FY1991, the Internal Revenue Service had operating costs of \$6.1 billion and average positions realized of 115,628.

## **Intergovernmental Relations**

A federal VAT would encroach on the primary source of state revenue because states would find it more difficult to raise their sales tax rates. But, precedents exist for the federal government to levy a new tax that states have already imposed. For example, the federal government levied death taxes and personal income taxes after many states already had passed them.

The possibility exists for the joint collection of a federal-state VAT. But states would have to replace their sales taxes with VATs with the same tax base as the federal VAT. Consequently, states would lose some of their fiscal discretion.

## **Size of Government**

There is an hypothesis that a relatively hidden tax such as the VAT leads to an expansion in the size of government. A VAT has the capacity to raise enormous revenues at a low tax rate. Households may underestimate their total tax burden because they pay VAT in small increments, and thus households may be less resistant to a higher VAT rate. But no conclusive evidence is currently available to support this hypothesis and it appears that the largest expansions in government spending in recent years have not been associated with any tax increases.

**Table 1. Data About Value-Added Taxes of Selected European Countries**

<b>Country</b>	<b>Total Tax Revenue as a % of GDP<sup>a</sup> at Market Prices (2000)</b>	<b>General Consumption Taxes as a % of GDP (2000)</b>	<b>General Consumption Taxes as a % of Total Tax Revenues (2000)</b>
Austria	43.7%	8.3%	19.0%
Belgium	45.6	7.4	16.3
Denmark	48.8	9.5	19.6
Finland	46.9	8.5	18.0
France	45.3	7.7	16.9
Germany	37.9	7.0	18.4
Greece	37.8	8.6	22.7
Ireland	31.1	6.7	21.5
Italy	42.0	6.6	15.8
Luxembourg	41.7	6.0	14.3
Netherlands	41.4	7.2	17.3
Norway	40.3	8.0	19.7
Portugal	34.5	8.3	24.2
Spain	35.2	6.2	17.6
Sweden	54.2	7.2	13.4
United Kingdom	37.4	6.9	18.4

Source: Adapted by CRS from OECD, *Revenue Statistics 1965-2001*, Paris, 2002.

a. GDP is an abbreviation for gross domestic product, which is a measure of total domestic output of goods and services.

## LEGISLATION

### **H.R. 25 (Linder)**

To promote freedom, fairness, and economic opportunity by repealing the income tax and other taxes, abolishing the Internal Revenue Service, and enacting a national sales tax to be administered primarily by the States. Introduced January 7, 2003; referred to the House Committee on Ways and Means.

### **H.R. 269 (English)**

Simplified USA Tax Act of 2003. Replaces the individual income tax, the corporate income tax, and the estate and gift taxes with a border-adjustable business tax (subtraction-method VAT) and a progressive consumed-income tax. Individuals may utilize the equivalent of universal Roth IRAs to encourage savings. Introduced January 8, 2003; referred to the House Committee on Ways and Means.

### **H.R. 278 (Graves)**

Date Certain Tax Code Replacement Act. Establishes within the legislative branch a National Commission on Tax Reform and Simplification that shall review and submit to Congress a report on (1) the present structure and provisions of the Internal Revenue Code; (2) whether tax systems imposed under the laws of other countries could provide more efficient, simple, and fair methods of funding the revenue requirements of the government; (3) whether the income tax should be replaced with a tax imposed in a different manner or on a different base; and (4) whether the Internal Revenue Code can be simplified, absent wholesale restructuring or replacement. Authorizes appropriations for the Commission. Any new federal tax system would require approval by Congress no later than July 4, 2007. If a new federal tax system is not approved by July 4, 2007, then Congress would be required to vote to reauthorize the Internal Revenue Code of 1986. Introduced January 8, 2003; referred to the House Committee on Ways and Means.

### **H.R. 1783 (Burgess)**

Freedom Flat Tax Act. Allows individuals to elect irrevocably to pay a flat tax as an alternative to our current income tax. Individuals engaged in a business activity could elect irrevocably, as an alternative to our current income tax system, to be taxed on business taxable income that equals gross sales less the cost of business inputs for business activity, wages, and retirement contributions. Introduced April 11, 2003; referred to the House Committee on Ways and Means.

### **H.R. 1789 (Crane)**

Crane Tithe Tax Act of 2003. Repeals the individual income tax, the corporate income tax, and the estate and gift taxes, and replaces these taxes with a flat rate tax of 10% on individuals' earned income. Provides for amnesty for all tax liability attributable to legal activities for prior years. Introduced April 11, 2003; referred to the House Committee on Ways and Means.

### **S. 112 (Hollings)**

War Financing Act of 2003. To amend the Internal Revenue Code of 1986 to impose a value added tax and to use the receipts from the tax to fund America's war effort. Introduced January 9, 2003; referred to the Senate Committee on Finance.

**S. 907 (Specter)**

Flat Tax Act of 2003. Imposes a 20% flat rate consumption tax (modified VAT) as a replacement of the individual income tax, the corporate income tax, and the estate and gift taxes. Introduced April 11, 2003; referred to the Committee on Finance.

**FOR ADDITIONAL READING****CRS Products**

CRS Report RL30351. *Consumption Taxes and the Level and Composition of Saving*, by Steven Maguire.

CRS Report 98-248. *A Federal Tax on Consumed Income: Background and Analysis*, by Gregg A. Esenwein.

CRS Report 98-529. *Flat Tax: An Overview of the Hall-Rabushka Proposal*, by James M. Bickley.

CRS Report 95-1141. *The Flat Tax and Other Proposals: Who Will Bear the Tax Burden?* by Jane G. Gravelle.

CRS Report 96-315. *The Flat Tax and Other Reform Proposals: Overview of the Issues*, by Gregg A. Esenwein and Jane G. Gravelle.

CRS Issue Brief IB95060. *Flat Tax Proposals and Fundamental Tax Reform*, by James M. Bickley.

CRS Report 98-901. *Short-Run Macroeconomic Effects of Fundamental Tax Reform*, by Thomas G. Woodward and Jane G. Gravelle.

CRS Issue Brief IB92069. *A Value-Added Tax Contrasted with a National Sales Tax*, by James M. Bickley.