

**The Bank Debit Tax in Colombia**

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## I. Introduction

Colombia has had a bank debit tax (BDT) since 1998. It was originally enacted as a temporary measure to finance the bailout of bankrupt financial institutions. The Colombian BDT, known formally as the Gravamen a los Movimientos Financieros (GMF), is a tax on withdrawals from savings and checking accounts, credit card transactions, loan disbursements, and certain other transactions. It was originally imposed at a 0.2 percent rate, and increased to 0.3 percent and made permanent in 2001. The tax is an important source of tax revenue to Colombia, contributing revenues equal to about 0.8 percent of GDP, or over 5 percent of total tax revenues.

The tax is similar in concept to the currency transactions tax proposed by Nobel Laureate James Tobin in the late 1970s.<sup>1</sup> Although Tobin's proposal sought to reduce the volatility of international financial markets, Latin American countries have been attracted to the BDT primarily because it raises a lot of money at what seems to be a low tax rate (Coelho *et al*, 2001).

Although all taxes have costs, the BDT may be especially burdensome. The BDT is a tax on financial intermediation. As such, it tends to encourage disintermediation. The tax is also tantamount to a cascading sales tax in sectors of the economy that use the banking system to facilitate transactions. Both of these factors create efficiency costs for the Colombian economy that probably exceed the efficiency costs per dollar raised of most other taxes.

This paper examines the history and economic effects of the BDT in Colombia. Section II reviews the history of the BDT in Colombia. Section III discusses its use throughout Latin America. Section IV examines the effects of Colombia's BDT on efficiency, equity, and tax administration. Section V considers a potential reform option—converting Colombia's BDT into a withholding tax. Section VI provides concluding remarks.

## **II. The BDT in Colombia**

Colombia adopted a 0.2 percent tax on financial transactions in 1998 as a temporary measure set to expire on December 31, 1999. The tax was earmarked to finance the bailout of mortgage institutions and debtors.<sup>2</sup> Nonetheless, during the first half of 1999, the government extended the tax for a year through December 31, 2000, eliminated the earmarking and stipulated that BDT revenues would be contributed to general revenues. Subsequently, the tax reform of 2000 (law 633) renamed the tax the Gravamen a los Movimientos Financieros, increased the rate to 0.3 percent, and made it permanent.

Thus, what was initially enacted as a temporary instrument to generate revenues for a specific purpose became an ongoing tax and part of general revenues. In 2001, the tax produced revenues of 1.4 billion pesos, or approximately 0.8 percent of GDP. Since 1999 on average the income obtained by GMF represented 5.5 percent of tax revenues and 7.4 percent of the domestic tax revenues (Table 2). The BDT generated nearly two-thirds as much revenues as tariffs.

## 1. Tax Characteristics

According to Colombia's tax collection agency, the Dirección de Impuestos y Aduanas Nacionales (DIAN), 67 percent of the GMF revenue for 2001 was generated from checking account withdrawals, 23 percent from savings account withdrawals and 7 percent from transactions of the deposit accounts held by financial intermediaries at the Central Bank.

The design of financial transactions taxes determines their revenue potential and how they affect financial markets. Initially the GMF had a broad base intended to limit tax avoidance. An important exception, however, was the allowance of multiple endorsements of checks, which became a major avenue for tax avoidance. Instead of cashing a check when it is received, it is now common for people to endorse a check and pass it along to a second party to pay a debt. This can happen many times before the check is ultimately presented to a bank for payment.

The original GMF also applied to many transactions among financial intermediaries. The tax was levied on all payments carried out by financial intermediaries on checking and savings accounts, on the issuance of checks, and on repurchased loans and interbank transactions. The tax also applied to currency transactions between intermediaries on the exchange market and to debits from deposit accounts (in either domestic or foreign currency) held by financial intermediaries at the central bank.<sup>3</sup>

The initial broad coverage of the tax created serious operational problems for the payment system. As a result, the interbank market virtually disappeared

overnight and the number of saving accounts held by individuals fell from around 22 million in 1998 to 16.7 million in December 1999.<sup>4</sup>

Policymakers were concerned about the burden of the tax on lower-income people and its impact on saving and investment. For this reason, tax payments related to social security and currency transactions between exchange market intermediaries were exempted in 2000, as well as securities transactions of clearance institutions. Also interbank transactions and certain transactions with the central bank (depository accounts for cash management purposes) were exempted. In addition, in an effort to reduce the burden on low- and middle-income people, a tax exemption was established for small savings accounts with monthly average transactions up to 4.2 million pesos. Taxpayers may each elect to mark one account as exempt.<sup>5</sup>

### **III. The application of the BDT in Latin America**

The BDT has been a popular source of revenue in Latin America. Argentina and Peru established taxes on financial transactions during the late 1980s. Brazil, Colombia, Ecuador, and Venezuela established their BDTs during the second half of the 1990s.

Table 2 summarizes the main characteristics of the BDTs established in Latin America. The comparison between the tax rates and their productivity (defined as revenue as a share of GDP divided by the tax rate) suggests that the tax base is sensitive to the rate level. Among the countries considered, Brazil and

Colombia have the lowest tax rates and the highest levels of productivity. Additionally, Coelho et.al. (2001) point out that these two countries have the broadest tax bases, which deter evasion and limit disintermediation.

Evidence from many countries shows that, because of the disintermediation generated by the BDT, tax productivity tends to decay over time. Revenues can sometimes be maintained by raising rates, but that tends to increase the tax avoidance and can ultimately be counterproductive. For example, in Colombia, the tax rate increased from 0.2 percent to 0.3 percent in 2001, but real BDT collections in 2002 were not much greater than their 2000 levels (Figure 1). A similar pattern may be observed in Brazil. (See Table 2.)

#### **IV. Economic Effects of the GMF**

A tax is measured against three criteria: efficiency, equity, and ease of administration. The GMF scores well against the last criterion, but not the other two. Because it is collected from financial institutions, which are financially sophisticated and small in number (about 60 banks and consumer credit institutions), the tax is relatively easy to collect and administer. But the GMF has at best mixed effects on equity, and fails by any efficiency measure.

##### **1. Efficiency**

The basic principle behind efficient real world taxation is that taxes should not distort prices in otherwise efficient markets. Most tax policy analysts interpret this condition as requiring that taxes be neutral among different

activities. The GMF violates this principle, but so do virtually all other taxes. The existing taxes in Colombia have an especially high excess burden, as discussed in Rutherford and Light (this volume). Thus, even though it is easy to establish that the GMF would be inefficient if added to an efficient tax system, it is less obvious in the context of Colombia.

Looked at alone, the GMF is hard to justify on efficiency grounds. First, it creates significant real distortions in the production of goods and services. Second, it discourages the use of financial intermediation services.

**a) Real distortions**

The GMF is sometimes rationalized as a small tax. At 0.3 percent, its rate is—on the surface—only a tiny fraction of the maximum VAT rate of 16 percent. But the GMF is not the VAT. It can create *effective* tax rates on sales many times as large as its 0.3 percent *statutory* rate, and it applies at widely varying rates to different products. Moreover, unlike the VAT, the bulk of the GMF is assessed on intermediate goods. (Coelho, Ebrill, and Summers 2001) Diamond and Mirrlees (1971) show that under very restrictive assumptions, taxes on production inputs are never efficient if taxes on final outputs are feasible. Thus, in this model, a VAT (perhaps with multiple rates) would always dominate a financial transaction tax on efficiency grounds.

Slemrod (1990), however, points out that the conditions necessary for so-called production efficiency—including the ability to tax away supernormal profits and the ability to tax all goods and services at variable rates—are unlikely



to hold in the real world. Indeed, the GMF is sometimes rationalized as an indirect tax on the underground economy, the output of which cannot easily be taxed by other means, or as an indirect tax on excess bank profits. Moreover, the convoluted schedule of VAT tax rates in Colombia is unlikely to be close to optimal. Thus, it is theoretically possible that taxes on intermediate goods might be part of an optimal tax system. But it is unlikely that the capricious pattern of taxation imposed under the GMF would be near the ideal.

Unlike the VAT, producers subject to GMF are not allowed to deduct expenses already subjected to the tax at earlier stages of production. As a result, the tax can “cascade,” meaning that the 0.3 percent rate can cumulate into a much larger tax through the production process. It can also mean that the effective tax rate can vary wildly among sectors of the economy.

Figure 2 shows how the cumulative GMF payments vary as a share of the output price and income as a function of the number of stages of production, assuming that each stage contributes an equal share of value and that the sale at each stage is subject to the GMF. By comparison, a broad-based VAT (although not the actual VAT in place in Colombia) would tax all goods at the same rate regardless of the number of stages of production.

The GMF thus places goods that are produced via many stages at a disadvantage relative to those produced in few stages. Large vertically integrated manufacturers have a competitive advantage over small companies that must rely on inputs from other companies. Low profit-margin businesses, such as grocers, face a strong incentive to conduct business in cash so as to avoid the tax.

Otherwise, they are likely to be put out of business because the tax would equal a relatively large share of their gross margin. By comparison, high profit-margin businesses, such as emerald dealers, will find the tax to be a small share of their profits.

All of these differences will manifest in distortions in the way production takes place, and in distortions among the types of final goods produced. The production process will be altered to minimize the number of stages of production and businesses will invest resources in tax evasion and avoidance that could otherwise be employed more productively. Consumers will tend to substitute away from good and services that face the highest tax rates (i.e., those produced in many stages). It is possible that some of the most highly taxed sectors are those that produce necessities, in which case the tax might resemble an optimal consumption tax, but that would raise equity issues. (See section 2 below.)

A plausible argument could be made that a temporary BDT could be efficient as it would be difficult to avoid and have minimal effect on economic behavior. It would effectively be a tax on old capital—taxing past savings decisions but neutral with respect to future decisions to work or save so long as people believe that the tax is truly temporary (an optimistic assumption given its history in Latin American countries). Thus, the ideal BDT would be explicitly temporary and levied at low rates as a transitional levy to be subsequently replaced with broad-based income or consumption taxes. (Coelho, Ebrill, and Summers 2001) But to be effective even temporarily, the BDT should have a

broad base or else it is easy to avoid and can thus have high efficiency costs per dollar collected.<sup>6</sup>

### **b) Financial Distortions**

The GMF is a tax on financial intermediation services. Taxpayers who conduct all transactions in cash or barter do not pay the tax directly (although they might still be affected indirectly to the extent that other parties with which they do business pay the tax). This is problematic. The GMF can constitute a significant transaction cost, which impairs economic efficiency. Indeed, Chia and Whalley (1999) argue based on a theoretical model that financial activity should be exempt from *all* taxes, even the VAT. The BDT—a selective tax *only* on financial services—is the direct opposite of this policy.

How might this transaction cost affect economic performance? First, it will discourage transactions subject to the tax. Second, it will encourage those who undertake such transactions to find alternative payment mechanisms to avoid the tax. Third, it can interfere with the operation of the banking system.

The welfare cost due to financial disintermediation depends on how responsive financial transactions are to the tax. If the tax cannot be easily avoided, so the volume of financial transactions remains near pre-tax levels, then the efficiency cost of the financial distortion would be lower than otherwise. Assuming that the supply of funds from the banking sector is perfectly elastic, the welfare cost of the tax would depend only on the compensated elasticity of demand for funds since the after-tax rate of return to financial institutions remains

unaltered by the tax. (If supply were less than perfectly elastic, the cost would also depend on the elasticity of supply.)

Evidence suggests that, at least in Colombia, the demand for cash and other financial instruments is highly elastic. Evidence discussed earlier suggests an immediate dampening effect of the tax on financial transactions. Kirilenko and Summers (2002) estimated that the tax depressed the demand for financial intermediation in Colombia by 41 percent for every dollar of tax raised. They measure financial intermediation by comparing the revenue yield of the tax after imposition to its level in a base period—generally immediately following imposition of the tax. The notion is that it takes people and companies a little while to adjust their behavior to the new tax.

Venezuela and Ecuador also experienced significant financial disintermediation as a result of their taxes—28 percent and 47 percent, respectively. Based on these data, Kirilenko and Summers estimated a substantial efficiency cost arising from BDTs—as much as 35 percent of revenues in Colombia, 30 percent in Venezuela, and 45 percent in Ecuador.<sup>7</sup> Kirilenko and Summers did not find a significant effect in Brazil, but that might be due to data limitations. The tax had been in place, off and on, for 7 years before the base period used for the disintermediation calculation. Thus, the base period already reflects a response to the tax. Although the paper tried to correct for this bias in an *ad hoc* manner, the change measured in the case of Brazil is unlikely to fully reflect the response to establishing the tax.<sup>8</sup>

Albuquerque's (2001) study of Brazilian experience uses a similar approach, regressing the revenue productivity of the tax against the tax rate. Albuquerque finds a statistically significant negative relationship between tax productivity and the tax rates (as can also be observed in Table 2), which suggests that the tax is distortionary. Based on his slope estimate, the welfare cost of the tax equals 21.5 percent of revenues at rates in effect in Brazil in 2000. This is modest compared with other countries and calculated marginal costs of funds for other taxes, but combined with the unmeasured distortions, such as those in the real allocation of goods and services, the deadweight loss from the tax in Brazil might be quantitatively significant.

The tax has apparently had a large effect on the demand for cash in Colombia. While cash represented on average 28 percent of the checking and saving accounts in 1998, the percentage increased to 32 percent in 1999. Asobancaria (The National Banking Association) estimated that the 0.2 percent tax generated a structural shift in the demand for money and increased the preference for cash by 5 percentage points. Lozano and Ramos (2000) found evidence of an acceleration in the annual growth rate of cash balances as a result of the tax, which did not diminish over time.

Our analysis confirms this result with new data. Figure 3 shows that the ratio of cash to the monetary base has been increasing since the BDT was implemented in late 1998. Between 1996 and 1998, the average ratio was 46 percent. It increased to 66 percent between January of 1999 and May of 2002. Looked at another way, World Bank (2002) reported that the ratio of cash to GDP

fell from 3.5 percent in 1990-1992 to 3.3 percent in 1996-1998, but increased to 4 percent in 1999 and to 4.2 percent in 2000. The increase in 1999 and 2000 suggests a dramatic and immediate response to the introduction of the tax.

Similarly, the ratio of cash to checking accounts remained in the 35 percent to 39 percent range from 1990 to 1998, but increased to 47 percent in 1999, before falling slightly to 43.5 percent in the 2000. This evidence must be interpreted with caution, however, because interest rates fell substantially over the same period. It is thus unclear how much of the changes in demand for financial instruments can be attributed to the tax and how much to the reduced cost of holding cash—and other factors—without conducting a multivariate analysis.

Two indicators, however, clearly show the reaction of economic agents towards the establishment of the BDT. The first is the number and value of cleared checks, which fell substantially when the 0.2 percent tax was implemented. The tax on checks is especially easy to avoid, either through the use of multiple endorsements or substituting cash for checks. Thus, it is not surprising that the number of checks cleared by the Central Bank plummeted from a monthly average of 15 million between January of 1997 and December of 1998, to an average of 8 million between January of 1999 and June of 2002. Likewise, the average value of cleared checks fell in half—from 56 billion pesos between January of 1997 and December of 1998, to 28 billion pesos between January of 1999 and June of 2002 (Figure 4).

The second indicator of the response of agents to the tax was the reduction in transactions in the foreign exchange market during 1999 and 2000, when this

type of transaction was taxed. (See Figure 5) Foreign exchange sale-purchase operations between intermediaries of the exchange market have been tax-exempt since 2001 and the total value of such transfers began to increase again. However, once again, this time period coincides with a period of growing devaluation expectations, and it is not obvious that the difference in foreign exchange transactions is statistically significant.

The suggestive results shown in figures 3 through 5 do not prove that the introduction of the GMF was the prime causal agent. The collapse of the banking system, which occurred at the same time, clearly played a role. Lozano and Ramos (2000) and Arbeláez and Zuluaga (2002) estimated models of the effect of the GMF on cash balances controlling for external financial factors. Both papers find positive and statistically significant effects of the introduction of the 0.2 percent tax on cash balances. Arbeláez and Zuluaga also examined the effect of the increase in rate from 0.2 to 0.3 percent, but did not find a statistically significant effect. Similarly, the relationship between the tax and foreign exchange balances was not statistically significant after controlling for other factors.

### **c) Long run consequences**

The long run consequences of bank transaction taxes may be significantly greater than what can be measured by simply looking at transaction volumes. The tax discourages the use of the financial system. It increases the cost of loans, especially short-term loans. For example, a 0.3 percent tax on a one-month loan is equivalent to a 3.7 percentage point surcharge on the annual interest rate. For a

one-week loan, the interest rate surcharge is 16.9 percentage points. Clearly, the tax must discourage short-term borrowing, or provide an incentive for short-term borrowers to find non-bank sources of funds. (Shome and Stotsky 1995)

Cash is an obvious dodge for the tax. Transfers of cash are not subject to tax (although withdrawals of cash from a bank are taxable). In consequence, more transactions are done in cash and fewer with checks, which creates several problems in Colombia. First, in many parts of the country, cash is dangerous. Ironically, the high risk of theft probably limits the extent of avoidance (because it raises the expected cost of avoidance), especially for large transactions, but it is clear that public policy should not be encouraging people to take on the added risk. Indeed, there might be an externality argument for the government to discourage cash holding, that is, to subsidize financial intermediation rather than tax it.

Second, encouraging transactions to be done in the form of cash makes it harder for authorities to track illegal activities such as drug trafficking and tax evasion. Tax authorities claim that a major purpose of the GMF is to tax activities in the illegal and informal sectors, but this feature of the GMF tends to undermine that objective.

The tax has also apparently encouraged the creation of alternative non-bank financial instruments. For example, business people can pass transferable notes among themselves instead of cash or checks. These notes lack some important features of cash or checks. For example, they are not guaranteed payable by any financial entities, and might not be enforceable in court.



More generally, the existence of these pseudo-cash instruments, if they become widespread, could create problems similar to those that arise with multiple unregulated currencies, such as lack of reliable exchange rates and high transaction costs. The development of uniform regulated currencies is thought to be a major contributor to economic development in the 19<sup>th</sup> and early 20<sup>th</sup> centuries. Indeed, the European countries were so impressed with the utility of a common currency (even though their separate currencies were regulated and traded on efficient exchanges) that most agreed to jettison their age-old currencies in exchange for a common currency, the Euro, despite the great economic and political transition costs.<sup>9</sup> It is ironic that BDTs may effectively be moving some Latin American countries in the opposite direction.

There is some empirical evidence on the value of low-cost systems of financial intermediation on economic growth. Levine, Loayza, and Beck (2000) compared the experiences of different countries over time and found that the efficiency of financial intermediation is strongly positively correlated with economic growth. For example, if Argentina could have increased the amount of private credit available to borrowers up to the mean level of developing countries, its growth rate would have been expected to increase by more than one percentage point per year during the sample period—a huge change over an extended period. This general result seems to be quite robust with respect to definition of intermediation, sample selection, and empirical specification. The authors speculate, “Financial intermediaries that are better at ameliorating information

and transaction costs induce a more efficient allocation of resources and faster growth.” (p. 62)

Other research (Beck, Levine, and Loayza 2000) finds that better financial intermediaries stimulate growth primarily by increasing productivity, rather than by stimulating saving. In other words, efficiently functioning banks can increase output by improving the allocation of existing capital, even if they don't increase the overall amount of domestic capital available to lend.

It is not known how much damage financial transaction taxes do to the level of saving and investment. The taxes clearly increase transaction costs and create a wedge between borrowing and lending costs.<sup>10</sup> This means that private returns on investment may have to be much higher than the returns to savers for an investment to be financed.

A related problem is that there is a tax incentive for banks to purchase government debt rather than engage in private lending, because the former is not subject to GMF while the latter is. Interest rates may not adjust to account for the tax advantage if the marginal source of funds to the government is foreign investors, who receive no such tax advantage by investing in Colombia.<sup>11</sup> Barajas and Steiner (2002) have identified a dramatic decrease in the supply of funds for private investment in Latin American countries, several of which have financial transaction taxes. Although the tax is not the primary cause, the shift of lending from private investors to public debt instruments is certainly consistent with the tax incentives created.

In sum, there are multiple channels through which the GMF may impair the economic performance of Colombia. It distorts prices for goods in a kind of ad hoc and undesirable way across industries and between vertically integrated and nonintegrated firms, creating excess burdens. It discourages the use of financial intermediation services, which may mitigate some of the burdens measured in the former case, but creates new distortions—roughly 35 percent of the revenue collected by one measure. More generally, it undermines the role of financial intermediation in society, which raises the risk of very high costs in the long run in terms of diminished economic growth. Although estimates do not exist for the combined effect of all of these factors together, the total excess burden of the tax is potentially large relative to the revenues collected.

## **2. Equity Issues**

Economists consider two kinds of equity. Horizontal equity is the notion that people in similar positions should pay similar amounts of tax. Vertical equity concerns the question of whether and to what extent higher income people should pay proportionately more tax than lower income people. Transaction taxes have uncertain and possibly undesirable effects on the distribution of tax burdens.

At first sight, the BDT seems progressive. The statutory incidence of the tax falls on participants in the financial market, who are likely to be higher-income individuals and larger companies. However, the economic incidence of the tax is likely to be distributed more widely to the extent that it is passed on to consumers in the form of higher prices for goods and services.

Moreover, very high income people might be more able to avoid the tax than middle income workers, so the tax might take a larger share of income from those with modest means. The excess burden of the tax will also tend to fall on those least able to avoid it. On the other hand, high-income people may be less inclined than those with moderate incomes to invest time in avoiding the tax. On balance, there is not a compelling argument to be made for the GMF on vertical equity grounds.

The tax also creates horizontal inequities. First, those who need the services of financial intermediaries pay higher taxes than those who don't. Thus, those who live in less safe parts of the country (for whom cash is a riskier asset) may face a higher burden from the tax than those who live in safer areas. Second, the tax will differentially affect the prices of different goods and services, so people who consume more of the highly taxed goods will face a higher burden than others. This aspect, too, might have a geographical element, as consumers closer to markets may pay lower prices than those who are far away and rely on additional middle men—and additional layers of tax—to get their products.

### **3. Administrative Issues**

Aside from revenue, one of the main rationales for the GMF is that it is easy for the tax authorities to administer and for taxpayers to comply with. Administrative and compliance costs are likely to be low because there are few payers—only about 60 banks and consumer credit institutions. And it is thought to be one of very few fiscal instruments available to tax the informal and underground sectors.

It is almost certainly true that the direct administrative and compliance costs are relatively small compared with revenues.<sup>12</sup> Banks and other financial institutions must already collect all of the information that they need to calculate their tax, and their records are highly automated, making the cost of tax preparation very small.

The tax authority's work is also simplified because there are few taxpayers to audit. Moreover, information from income tax and VAT declarations could, in principle, be used to gauge the accuracy of GMF returns. In turn, GMF declarations provide information about other taxable activities undertaken by financial institutions and their clients. Indeed, DIAN has planned to use the information from GMF collections to estimate the size of the underground economy, but the data are not available.

Nonetheless, like other taxes, the GMF creates numerous avenues for tax avoidance and evasion and thus there are challenges in maintaining the tax base. For example, wealthy individuals have apparently set up arrangements with their financial institutions to conduct transactions via nontaxable accounts, like fiduciary accounts that are permitted under financial regulations. Some people have apparently taken advantage of a special exemption for accounts set up to pay for housing to allow taxpayers with no interest in buying a house to shelter up to 4,200,000 pesos per month of transactions, often maintaining several accounts even though the exemption is supposed to apply to only one account per person. There is some evidence that banks are also using internal accounts, so called

compensation accounts (cuentas contables), to hide from tax authorities certain transactions that should be taxed.

DIAN, for its part, is trying to deter illegal evasion schemes, but there seemed to be considerable disagreement and misunderstanding about which transactions were taxable, and which are exempt. In any event, it seems that the tax is not so simple in practice.

There is also the question of whether the GMF may aid tax enforcement and compliance by bringing more taxpayers and transactions to the attention of the tax authorities. In particular, we were told that drug traffickers and guerillas have to use financial intermediaries simply because of the scale of their transactions. Thus, the GMF provides the possibility of aiding detection of money laundering and drug transactions. There is no evidence on the efficacy of this approach. However, by penalizing transactions made through the banking sector, the tax ironically encourages more transactions to be undertaken in cash. That is, it can actually increase the size of the underground sector and indirectly undermine tax administration efforts and efforts to combat illegal activities.

#### **V. Should the GMF be Converted into a Withholding Tax?**

One policy option, which was apparently considered and rejected by policymakers in Colombia, was to use the GMF as a kind of withholding tax for the VAT or income tax. Under this scheme, the tax would be creditable against the VAT or the income tax.<sup>13</sup> The advantage of this approach is that it might

allow revenue authorities to collect revenue primarily from the informal and underground sectors.

However, there are several notable drawbacks of this plan. The fatal flaw is that it is probably beyond the ability of the revenue authorities to enforce GMF tax credits without substantial fraud and evasion. In addition, the tax could be regressive. Many of those untaxed under the income tax and VAT have very low incomes, and they would not benefit from credits against their GMF. It is often noted that low-income people are exempt from the tax because accounts with monthly transactions up to COP\$4.2 million are exempt. However, the micro and small enterprises that have bank accounts have monthly transactions that average of \$COP7 million according to DIAN. Those enterprises are exempt from VAT and income tax. Thus, they could not apply a GMF credit against other taxes.

Finally, even if the withholding tax were administrable, it might not raise much revenue. It is likely that many transactions in the informal sector are in cash. A survey of microenterprises in 2000 published by the National Department of Statistics (DANE) in 2002 found that only 39.6 percent of 967,315 microenterprises had accounting registers. It is safe to assume that few if any of the remaining 60.6 percent have checking accounts. As a result, the cost of the tax would likely to be very great as a share of the revenue ultimately collected.

## VI. Conclusions

The GMF appears to be an inefficient means of raising revenues, and its benefits in terms of equity and tax administration are questionable at best. The tax damages the Colombian economy in many ways, most importantly, by interfering in the process of financial intermediation. The tax also hampers the economy through its cascading effect on the cost of goods and services. For products that are produced in many stages, the small 0.3 percent tax can amount to a much larger tax. It thus can have highly variable effects on the prices of goods sold, implicitly favoring goods produced in vertically integrated sectors over others. Moreover, by encouraging the use of cash and other alternatives to taxed financial services, it may even undermine efforts to track activities of the underground economy.

Politicians seem to like the tax because its rate is low and they believe it is not perceived as burdensome. That view may be incorrect. Among individuals, the tax is the second least popular tax after the VAT. [cite survey results reported elsewhere in this volume] 39 percent of respondents said that they would like to eliminate the GMF, as compared with 11 percent for the income tax. Only the VAT, which almost two-thirds of respondents would like to kill, is less popular. Although the GMF was slightly less unpopular among low-income than among middle- and high-income taxpayers, even low-income people ranked it second on their hit list. Similarly, only a tiny fraction of survey respondents said that they would like to keep the GMF—6 percent compared with 5 percent who would keep the VAT and 22 percent who favor the income tax.



Business owners feel even stronger—they despise the GMF far more than any other levy. Almost 56 percent would eliminate the GMF compared with 4 percent who would kill the VAT. The second least attractive tax among business owners is the annual wealth tax, which 34 percent would choose to eliminate. Only 0.3 percent said that they would like to keep the GMF.

The ideal solution would be to repeal the tax and make up the revenue by closing loopholes and improving enforcement in the VAT (and/or other taxes). That would enhance Colombia's economic welfare two ways: by eliminating an extremely inefficient tax (the GMF) and by improving the efficiency of the VAT.

If that is not feasible, there are few good options available. Obvious loopholes in the tax should be eliminated. The most notable is tax avoidance via multiple endorsements. Financial institution loopholes such as fiduciary accounts and compensation accounts in banks (cuentas contables) should also be eliminated.

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### Notes

<sup>1</sup> See Tobin (1978 and 1994).

<sup>2</sup> The banking crisis arose when interest rates skyrocketed in the late 1990s. The interest rate increase threatened many homeowners who held variable rate mortgages (the norm in Colombia) with default. Government assistance to banks allowed them to restructure the loans to prevent many foreclosures.

<sup>3</sup> In accordance with Article 22 of Law 31 of 1992, the Central Bank can open checking accounts and make deposit contracts with public and private corporations to enable them to carry out their operations with the Central Bank.

<sup>4</sup> Lozano and Ramos (2000) present data from the Central Bank on the collapse of the interbank market. Data on the number of saving accounts are also from the Central Bank as cited in World Bank (2002).

<sup>5</sup> According to DIAN, this was the source of significant fraud as individuals established multiple tax-exempt accounts. Some financial intermediaries were fined for allowing the establishment of multiple accounts. DIAN officials believe that this particular avenue for tax evasion is now under control.

<sup>6</sup> This point has been studied particularly for international transactions taxes. See Greenaway, D. (1995) "Policy forum: Sand in the Wheels of International Finance" *The Economic Journal*, Vol. 105; Eichengreen, B., Tobin, J. and Wyplosz Ch. (1995) "Two Cases for Sand in the Wheels of International

Finance" *The Economic Journal* Vol 105; Garber, P. and Taylor, M. (1995) "Sand in the Wheels of Foreign Exchange Markets: A Skeptical Note" *The Economic Journal* Vol 105; and Kenen, P. (1995) "Capital controls, the EMS and Emu" *The Economic Journal* Vol 105.

<sup>7</sup> The authors develop a contracting model of financial intermediation, but their estimated deadweight loss is effectively simply a welfare triangle, measured as the area under the demand for funds curve under the assumption that the tax is fully passed on to consumers (i.e., perfectly elastic supply of funds).

<sup>8</sup> Indeed, the estimate of disintermediation and welfare loss are both likely to be underestimated in all the countries by Kirilenko and Summers's methodology because of the implausible assumption that the period immediately after the tax is introduced represents a no-tax equilibrium. As acknowledged by the authors, some forms of financial disintermediation, such as multiple endorsement of checks and increased use of cash, may be undertaken immediately at relatively little cost, so the baseline for comparison will already reflect some reaction to the tax.

<sup>9</sup> Frankel and Rose (2002) find statistically and numerically significant effects of participating in a currency union on trade and economic growth.

<sup>10</sup> Arbeláez and Zuluaga (2002) find a significant effect of the GMF on interest margins as well as on bank profitability.

<sup>11</sup> One response to these incentives could be for foreigners to hold private debt and Colombian banks to hold government debt. However, to the extent that domestic lenders can make domestic loans at lower costs than foreigners—for example, because their costs of collecting information about borrowers are lower—this would still diminish the supply of capital for local investment.

<sup>12</sup> There is no direct evidence on administrative and compliance costs. Conversations with DIAN indicate that they believe costs to be relatively low in Colombia. This assertion is also made in Coelho, Ebrill and Summers (2001) p. 8.

<sup>13</sup> Legislation in Argentina and Ecuador actually allowed their tax authorities to implement a BDT as a withholding tax against income or sales taxes, but neither country has actually implemented the tax credit to offset the BDT.



**Table 1**  
**EVOLUTION OF GMF COLLECTION**

Year	GMF	Tax revenues	Domestic Tax Revenues	GMF/Tax Revenues	GMF/Domestic Tax Revenues	GMF	Tax revenues	Domestic Tax Revenues
		(COP Millions)					(% of GDP)	
1999	881,000	16,067,000	12,024,000	5.5	7.3	0.7	12.0	9.0
2000	1,037,000	19,644,000	14,452,000	5.3	7.2	0.6	12.7	9.4
2001	1,421,000	24,802,000	18,375,000	5.7	7.7	0.8	13.2	9.8
2001 I Sem	712,000	13,084,000	9,908,000	5.4	7.2	0.4	7.0	5.3
2002 I Sem	682,000	12,885,000	9,993,000	5.3	6.8	0.3	6.2	4.8

Source: Fedesarrollo calculations based on data from DIAN

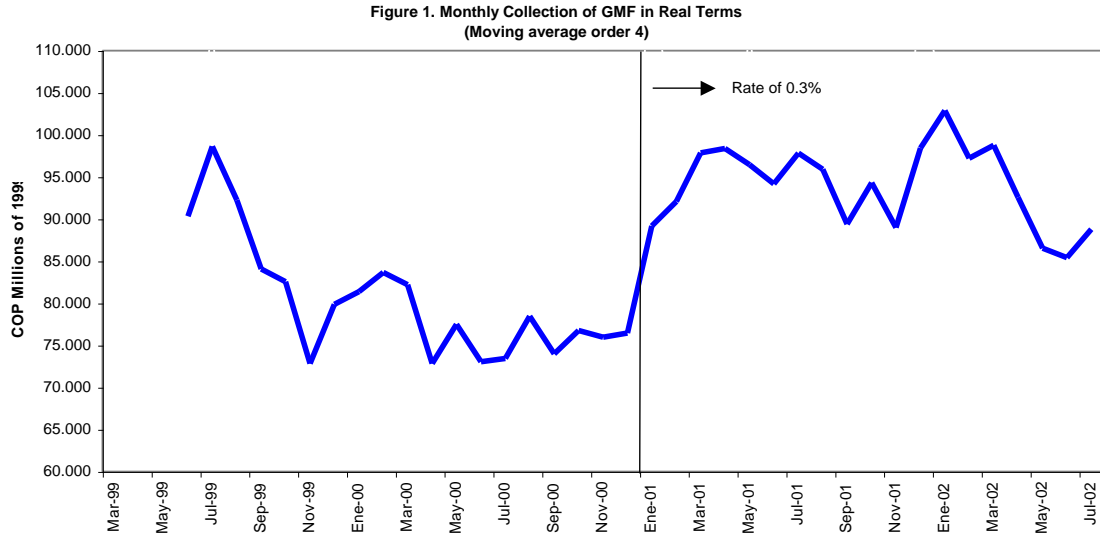
**Table 2**  
**BANK DEBIT TAX IN LATIN AMERICA**  
 (Percentages)

Countries	Year	Rate	Collection as % of GDP	Collection as % of tax revenues	Productivity 2/
<b>Countries with tax in force by July, 2002</b>					
Argentina	1989	0.70	0.66	4.3	0.94
	1990	0.30	0.30	2.0	0.99
	1991	1.05 1/	0.91	5.4	0.86
	1992	0.60 1/	0.29	1.5	0.97
	2001	0.50	1.45	7.4	2.89
	2002	0.60	n d	9.2	n d
Brazil	1994	0.25	1.06	3.6	4.24
	1997	0.20	0.80	2.8	4.00
	1998	0.20	0.90	3.0	4.50
	1999	0.22 1/	0.83	2.9	3.79
	2000	0.34 1/	1.33	4.8	3.96
	2001	0.38	1.45	4.2	3.81
Colombia	1999	0.20	0.73	5.5	3.70
	2000	0.20	0.60	5.3	3.00
	2001	0.30	0.80	5.7	4.00
Venezuela	1994	0.75	1.30	7.7	2.60
	1999	0.50	0.80	7.9	1.60
	2000	0.50	0.40	3.7	0.80
	2002	0.75	n d	n d	n d
<b>Countries that have had BDT</b>					
Ecuador	1999	1.00	3.50	26.7	3.50
	2000	0.80	2.33	17.1	2.91
Peru	1990	1.41 1/	0.59	6.4	0.42
	1991	0.81 1/	0.46	5.0	0.57

Source: ECLAC (United Nations Economic Committee of Latin America and Caribbean).

1/ Average rate adjusted

2/ Productivity is collection/GDP divided by the rate.



Source: Fedesarrollo with data DIAN

**Figure 2.**  
**GMF as Share of Price and Income**  
**By Number of Stages of Production**

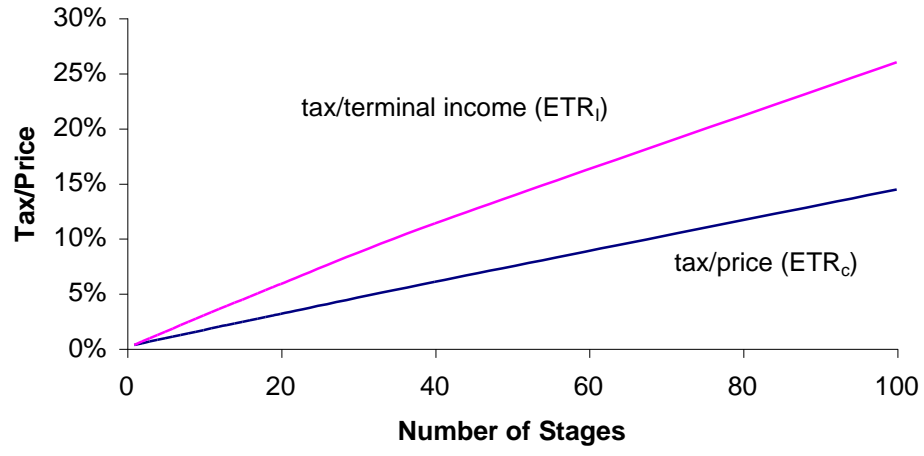
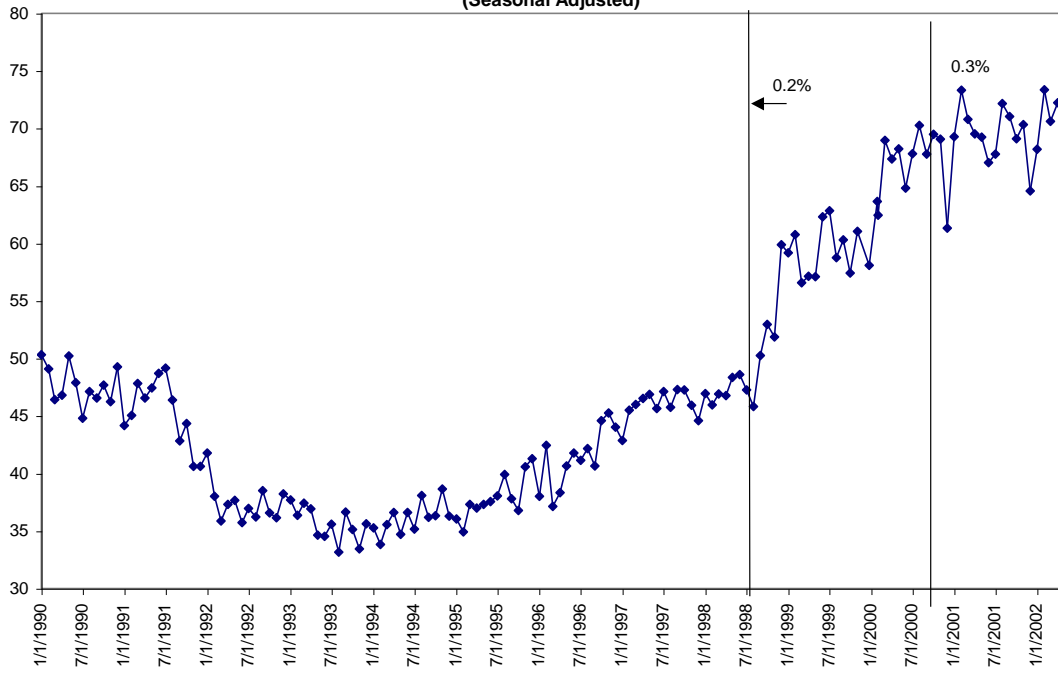
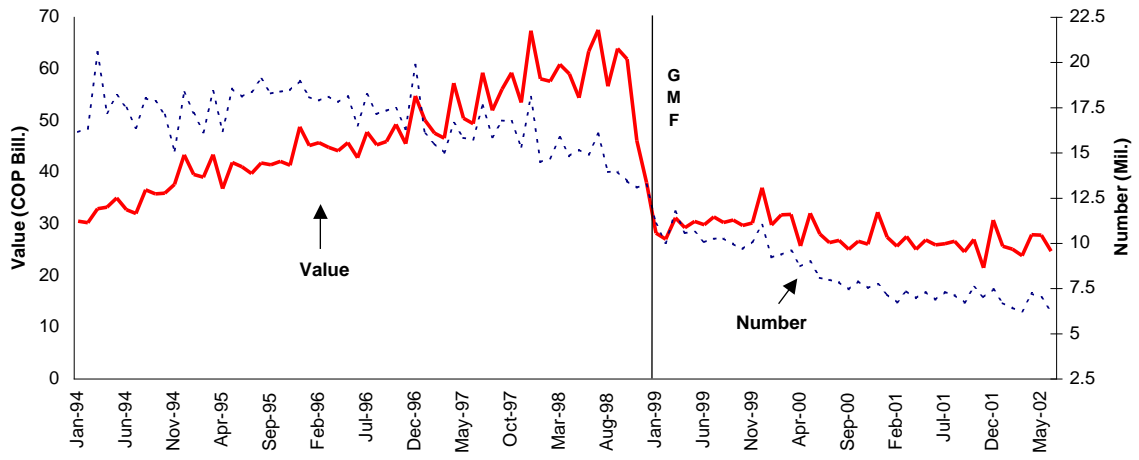


Figure 3  
Cash/Monetary Base  
(Seasonal Adjusted)



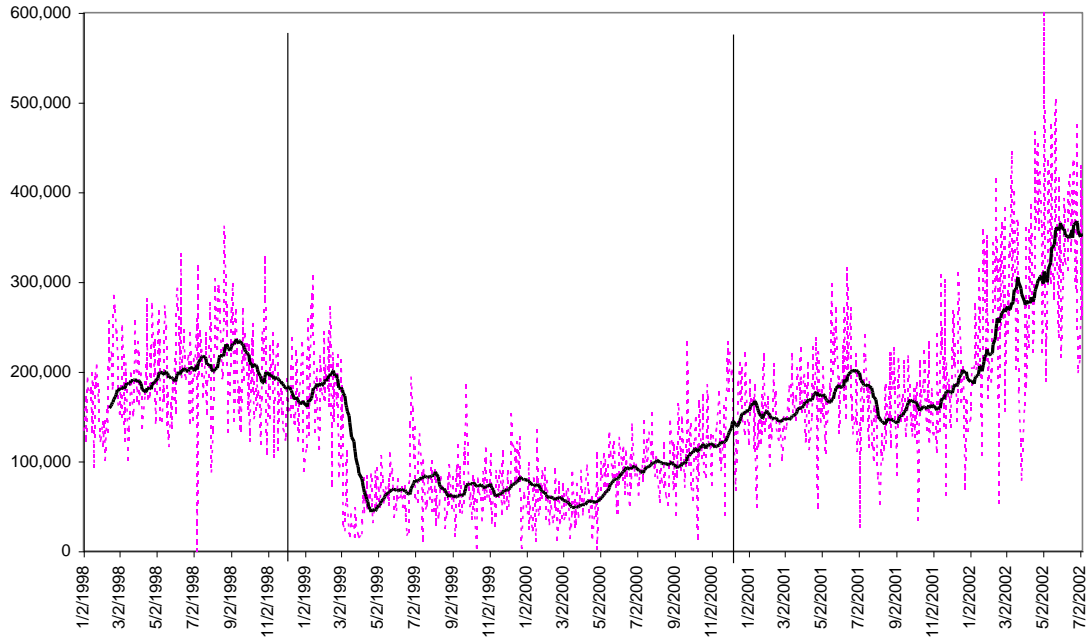
Source: Banco de la República

**Figure 4**  
**Value and number of cleared checks**



Source: Asobancaria

**Figure 5**  
**Total Value Settled in the Foreign Exchange Market**  
**US Dollar Thousands**



Source: Banco de la República