

Why and how to apply a Value Added Tax on financial services



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Preface

The crisis has triggered a renewed interest in the taxation of the banking sector. A key trigger is the exemption from VAT on credit provision as well as some other financial services prevailing in the EU as a direct result of the exemption contained in the EU VAT directive.

IMF among others have proposed the introduction of substitutes for the real thing like Financial Activity Taxes in various versions. Some countries have already variants in place France and Denmark. Norway and Sweden is also considering the introduction of tax systems to compensate for the lack of a proper VAT on financial services.

The problems associated with FAT taxes such as the Danish tax on wage income are well known also in the general literature. It may well increase cost of providing credit to households, thus compensating for the lack of VAT on consumer credit provision, but it will also strengthen other distortions arising from the lack of VAT on banking credits namely over taxation of credits to VAT-registered businesses.

This is then the background to this study: why not go for the real thing. Currently, the EU's VAT directive is de facto stopping member states for doing exactly that. This study suggest that the time could be ripe for reconsidering the impossibility of a real VAT on financial services. As a whole, distortions may have risen over time while the technical barriers to a smart VAT system on financial services may have fallen. In other words, a cost-benefit calculation may suggest that the benefits of reform has risen because the costs of status quo are rising while the costs of reform has fallen. The report use data from Sweden to illustrate key points, but arguments relevant for all countries with VAT-systems.

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Executive summary

In general, private consumption is subjected to VAT, while financial services such as provision of credit is VAT-exempt.

The exemption creates a number of economic distortions in our economies. Firstly, VAT registered businesses pay too much when they are buying financial services, while consumers pay too little. Financial institutions pay VAT on their purchases, and the VAT costs are passed on to business customers who cannot deduct them in their own VAT bill (“hidden VAT”). By contrast, consumers gain an advantage as no VAT is applied to the real services that banks provide. This is a classical example of a distorted allocation of resources.

Secondly, the exemption creates an incentive to insource production processes where they could have been outsourced. The reason is that VAT on the purchased inputs would be an additional expense compared to an insourcing scenario where the same value would be produced in-house. As a result, net of VAT production costs in the banking sector are likely to be higher as the incentive to save on taxes may outweigh the benefit from buying from lower cost external suppliers.

The best solution to this problem is to go for something like a full VAT model for financial services. We put forward a relatively simple model where all consumers – VAT-registered or not – pay VAT on all services they buy. For a loan, the VAT charge is proposed to be equal to the interest rate on the loan minus the interest rate paid on deposits with the central bank. The difference is essentially associated with all the costs the bank faces as it converts a risk free investment into a specific loan to a customer such as buying/leasing premises, IT equipment, assessing creditworthiness, covering for the risk of losses etc. These are the true costs associated with credit provision, on which VAT should be charged.

We also put forward a simplified version where business-to-business transactions are zero rate while the VAT assessment for private consumers are done at the “macro-level” for each institution. The basic point is that private consumers have no outgoing VAT payments and hence no use for an invoice with the VAT payment assessed separately. In this model, financial institutions can reclaim all ingoing VAT – and hence insure that business customers do not pay hidden VAT – while private consumers pay full VAT.

All significant credit providers are to be included in such a system order to prevent regulatory leakage. For instance, loans provided by large department stores or car dealers should be included, as should credit provision by foreign service providers.

In a world of increasing digitalisation of financial services across entire value chains and products with large scope for out sourcing to other countries, the importance of bringing in foreign source providers in a consumption based tax system can hardly be overestimated.

The inclusion of foreign source providers is in line with EU tax law stipulating that cross border services should be subjected to the VAT rules in the country where consumption takes place. We discuss some practicalities of this principle.

Our assessment is that it should relatively “easy” to make this provision stick in real life as a service provided from abroad – in particular loans on anything but a minimal scale – will require the foreign credit provider to leave a clear footprints in Sweden. For purchases of white goods, cars and houses, they would typically seek collateral which in turn requires them to log their claims with Swedish authorities. We consider the risk associated with dodging the VAT claim while logging their claims on collateral as very high, ensuring that most foreign credit providers would comply. In fact, we consider the prospective effective compliance rates as being much higher than in such areas as purchase of e-books, games etc. where post purchase relations between buyer and seller is typically nil and unit purchase sales values very low.

A number of alternatives to the full VAT model are in place in different countries across the globe. However, while solving some of the distortions described, they do not solve all and potentially create new ones. One particular model is the so-called Financial Activity Tax, previously promoted by the International Monetary Fund and used in a specific version (wage bill tax) in Denmark. The problem with the model is precisely that it taxes activity, not consumption. As a result, the overcharging of businesses is compounded as they still face hidden VAT while now also have to pay for higher bank costs linked to wage taxes. In addition, the competitive position of local banks might be eroded as foreign banks might not be subject the same financial activity tax.

The present EU VAT directive does not allow member states to use our preferred VAT model for financial services. The directive does have a so-called “Option to Tax” which provides the member states the option to allow financial institutions to opt into such partial VAT systems.

What could instead be considered was a model that allowed member states the option to impose an obligatory VAT model for financial services that was consistent with the principles outlined in this paper: it must be comprehensive, internal market consistent and doing away with the many distortions embedded in the current system.

Chapter 1 Distortions in the Current VAT Exemption System

The EU as well as a number of other countries have implemented a so-called Value Added Tax system that imposes a tax on private consumption. It is well recognised in theory, and partly also in practice, that a well-functioning VAT system is characterised by a broad base i.e. few or none exemptions – and as a general rule also with a uniform tax rate. Yet from the very beginning, the VAT treatment of financial services has bedevilled practitioners. As a result, the provision of financial services is largely exempt from the VAT system in most EU countries, creating substantial economic distortions as well as compliance costs for institutions and authorities.

We start out explaining the exemption rules for financial services in Europe, in particular we touch on an existing room for over-riding the exemption, the so-called “option to tax” (Section 1.1). We then go into more detail with the basic principles of the ordinary VAT system (1.2) as a prelude to a brief presentation of five key distortions that arise from the VAT-exemption of financial services (1.3-1.7).

1.1 VAT treatment of financial services in the EU

Nowhere in the world is there an ideal VAT system in place for financial services. The reason is chiefly that there are real difficulties associated with determining a proper VAT base of credit provision. In the EU, these challenges have been deemed so insurmountable that an exemption system is in place, according to which no VAT is levied on most financial services. In return, the financial institutions cannot deduct the VAT they pay for their inputs.

However, there exists a way of over-riding the exemption. In fact, member states of the European Union have the right of introducing legislation that grants financial institutions the option of letting themselves be value added taxed in return for the possibility of deducting their input VAT and possibly other incentives such as a lower wage bill tax base.¹

The member states have considerable leeway in designing such legislation.² There are at least four broad areas that the member states must decide on in framing the choice of financial institutions:

- Scope:
 - Customers: What are the customer segments that the financial institution is allowed to pay tax for? Would it be both households and businesses?
 - Transactions: What kinds of transactions can be taxed? Would it be services for which fees are paid, loans, deposits, or foreign exchange and securities trading?

¹ Council Directive 2006/112/EC (“VAT Directive”); European Banking Federation (2009); The case of France.

² Council Directive 2006/112/EC (“VAT Directive”); European Banking Federation (2009); The exception is case C-172/96 of 14th of July 1998 where the tax base for buying and selling foreign exchange, debt securities and derivatives (but not loans) was ruled to be the net margin.

- Financial institutions: Who has the option – leasing companies, retailers selling on credit, banks etc.?
- Flexibility of application:
 - Choice menu: Can financial institutions decide whether to pay tax on a transaction-by-transaction basis, or must they extend their choice to all similar customers and transactions? Or is it all customers/transactions or nothing?
 - Irrevocability: If a financial institution opts in but regrets at a later stage, can it change course?
- Incentives: Are there other benefits than deduction of input VAT? For instance, if a financial institution opts in and pays tax, will it earn a rebate on other taxes?
- Cross-border trade: How would the option look like in case of exports and imports?

For example, Austria restricts the option to only two types of transactions, namely credit for the purpose of acquiring a taxable good or service and certain credit card transactions. Germany allows financial institutions to apply the option on a transaction-by-transaction basis, but restricts it to taxable customers. Likewise, the rules in Belgium, Estonia, Lithuania, and France differ considerably.³

Member states are also allowed to forbid an option to tax, or to restrict it in any way they want. The only thing they cannot do is to mandate value added taxation. But they can provide incentives that would make it desirable for firms to opt in. In addition, if opt-in is sufficiently desirable for most customers and transactions, a choice menu might incentivize financial institutions to include *all* customers and transactions.

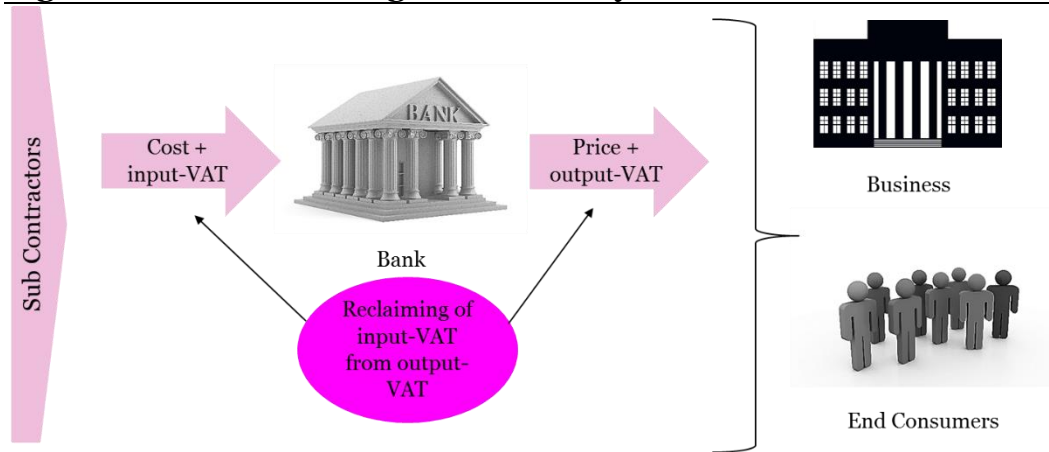
Despite the existence of the option to tax, most member countries of the EU do not make use of it. Moreover, in the six countries that do use it, financial institutions often do not opt in.⁴ As a result, the prevailing VAT regime for financial services in Europe is exemption.

1.2 VAT as a tax on consumption

VAT is a broad-based tax on private consumption of goods and services in the country where the consumption takes place. Only final consumption is taxed, as opposed to firms' purchases of goods and services used for productive ends. These are taxed initially but the tax expense is recovered later, so that effectively no VAT is paid on inputs to production. Specifically, VAT-registered firms may deduct what they have paid in VAT on their inputs (so-called "input-VAT") from the VAT charged to their customers ("output-VAT"). Since firms add value by transforming the inputs they buy into the products they sell, in most cases enough output-VAT is paid that all the input-VAT can be deducted. Effectively, the VAT is passed through from firm to firm, until a final consumer buys the products and pays the VAT. The tax base of the VAT is the cumulated value added from the first to the final producer. The situation is illustrated in Figure 1 in the case of a bank (supposing that banks are part of a VAT system).

³ European Banking Federation (2009).

⁴ European Banking Federation (2009).

Figure 1 The functioning of the VAT-system

Note: The general framework to see how VAT optimally should be transferred from banks to their customers.

Source: Copenhagen Economics

There are three basic optimality principles of a VAT system:

1. Only private consumption by end consumers is effectively taxed.
2. No relative prices for consumers or firms are affected by the VAT system, and it has no distorting implications for firm or consumer behaviour.
3. All equivalent financial services, even when not provided by a financial institution, are taxed similarly to avoid competition distortions.

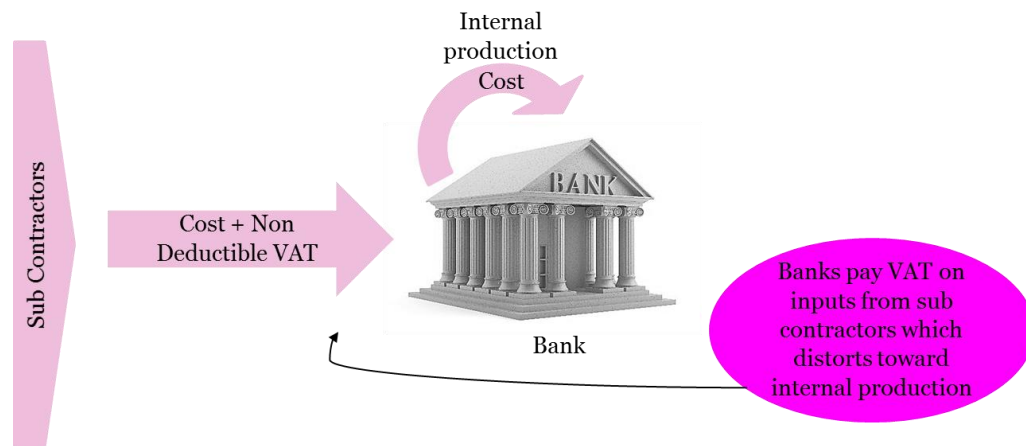
If the refund system works as intended, and if the VAT is levied equally on all products and providers, these principles will be achieved.

Problems arise when some products are exempt from VAT. In the EU VAT system, this is the case for many, but not all, financial services, and the practices in different EU countries differ. For banks selling the VAT-exempt products, they are not allowed to reclaim the input VAT related to the production of VAT exempt products. As a result, input-VAT becomes a cost for banks – a cost they have to reclaim by raising their output prices. This leads to a situation in which the three optimally conditions above are not satisfied. Relative prices are distorted, resulting in inefficiencies in the demand for financial services from different types of costumers, unfair competition etc.

1.3 Banks are biased against outsourcing

Input-VAT is a cost for banks. Hence, from a cost minimization perspective, banks have incentives to produce goods and services internally rather than buying from subcontractors, see Figure 2.

Figure 2 VAT-exemption reduces banks' demand for outsourcing



Note: Banks incur an additional cost on inputs from sub-contractors since they can't deduct the VAT payed on these goods/services. This implies that banks will substitute services from subcontractors that are subject to VAT with internal production that is not subject to VAT since this reduces costs.

Source: Copenhagen Economics

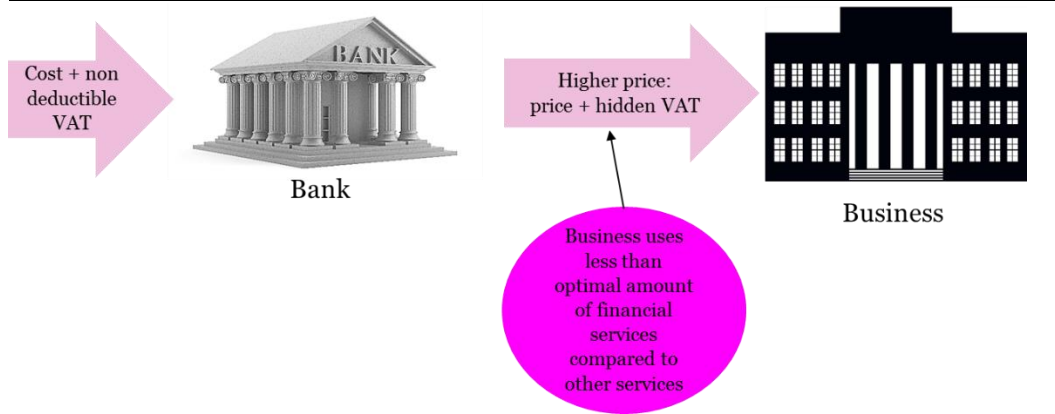
Importantly, these incentives emerge because of higher taxes on services produced externally – not because it is economically efficient given the real cost of production. As such, the VAT-exemption distorts banks' net input prices, and their demand from subcontractors will be inefficiently low compared to the social optimum.

1.4 Higher costs for non-financial enterprises

In a competitive market, banks cover their cost from non-deductible VAT by increasing the prices charged to their customers. As a result, the input-VAT of banks ends up in their output prices as so-called "hidden VAT". This means that the input-VAT of banks is partially passed through, but not as actual VAT that VAT-registered buyers can deduct.

VAT-registered buyers of financial services derive no benefits from the VAT-exemption on the value added within financial firms. These enterprises could have deducted the input-VAT against their own output-VAT. Instead, they suffer from the hidden VAT on financial services, which cannot be deducted against their output-VAT, see Figure 3. In the end, we have a price distortion on banks' output prices, meaning that the demand of non-financial firms for financial services will be lower than the social optimum. As a result, firms may invest less.

Figure 3 VAT-exemption as a extra costs for non-financial enterprises



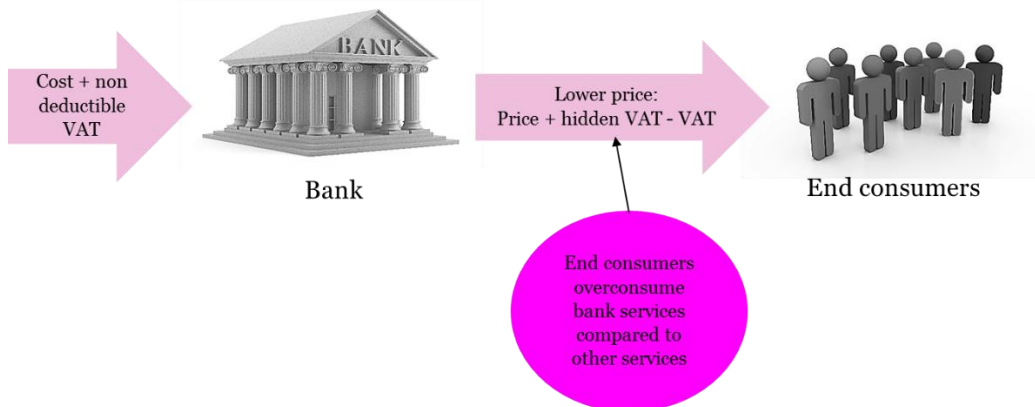
Note: Banks incur an additional cost on inputs from sub-contractors since they can't deduct the VAT payed on these goods/services. To compensate for the higher cost the bank will raise the price of its good, thereby incurring a hidden VAT on the businesses who buy their services. Since businesses can't deduct hidden VAT their costs for financial services increases which reduces the demand for the financial services and increases demand for other services, implying distorted consumption patterns.

Source: Copenhagen Economics

1.5 Lower costs for consumers

If financial services were treated as all other goods and services, private consumers would have to pay the standard VAT rate. Instead, they have to pay the hidden VAT only. The hidden VAT is typically lower than the standard VAT, since the value added in banks are not included in the hidden VAT, and because banks may be able to deduct some of their input-VAT. Hence, the VAT-exemption represents a distorting subsidy towards private consumption of financial services (payment services, taking out loans etc.), and the private consumption of financial services will be inefficiently high compared to the social optimum, see Figure 4.

Figure 4 VAT-exemption as a subsidy towards private consumption



Note: Banks incur an additional cost on inputs from sub-contractors since they can't deduct the VAT payed on these goods/services. To compensate for the higher cost the bank will raise the price of its good, thereby incurring a hidden VAT on the end consumers who buy their services. The hidden VAT will be lower than the actual VAT since banks are able to deduct VAT on some services and thus don't have to compensate for full VAT. Since consumers don't pay VAT the price on financial goods will be lower due to the VAT exemption. This implies that consumers are subsidised when consuming financial goods and therefore will overconsume bank services compared to other services.

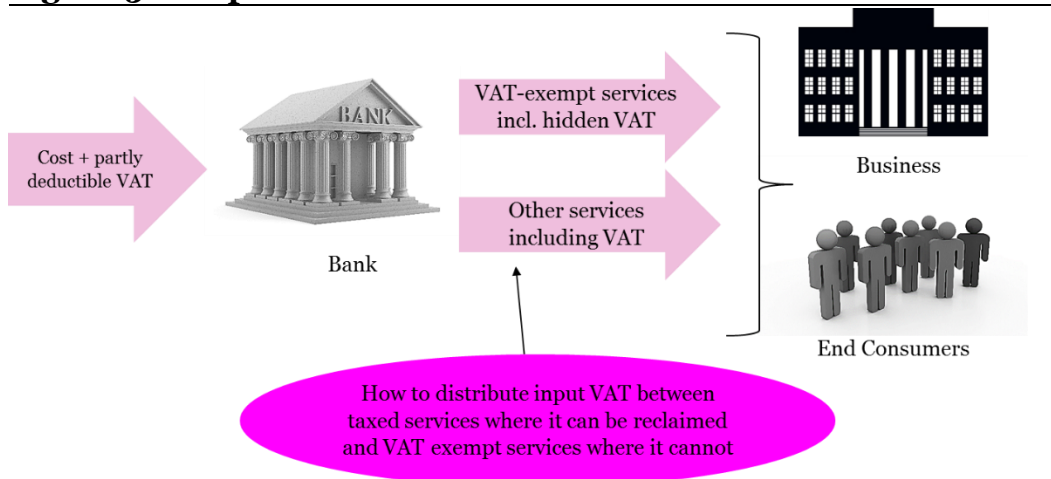
Source: Copenhagen Economics

1.6 Compliance costs

The VAT directive defines which financial services are exempt from VAT and which services are not. As illustrated in Figure 5, many financial institutions provide both types of services, and for each service offered, they face two types of administrative complications:

- a) Is the given service exempt or not?
- b) How to allocate the input-VAT on taxed services where it is recoverable and on VAT exempt services where it is not?

Moreover, incentive problems arise in so-called mixed supply situations where a VAT-exempt financial service is delivered alongside a taxed service. In such cases, there are always incentives to shift the tax base towards the service that is non-exempt.

Figure 5 Compliance costs

Note: Some services provided by the bank are subject to VAT and some are not. This means that banks can deduct some of the VAT that they incur from sub-contractors. Because of this the bank has to decide on how to distribute input VAT between taxed services where it can be reclaimed and VAT exempt services where it can't.

Source: Copenhagen Economics

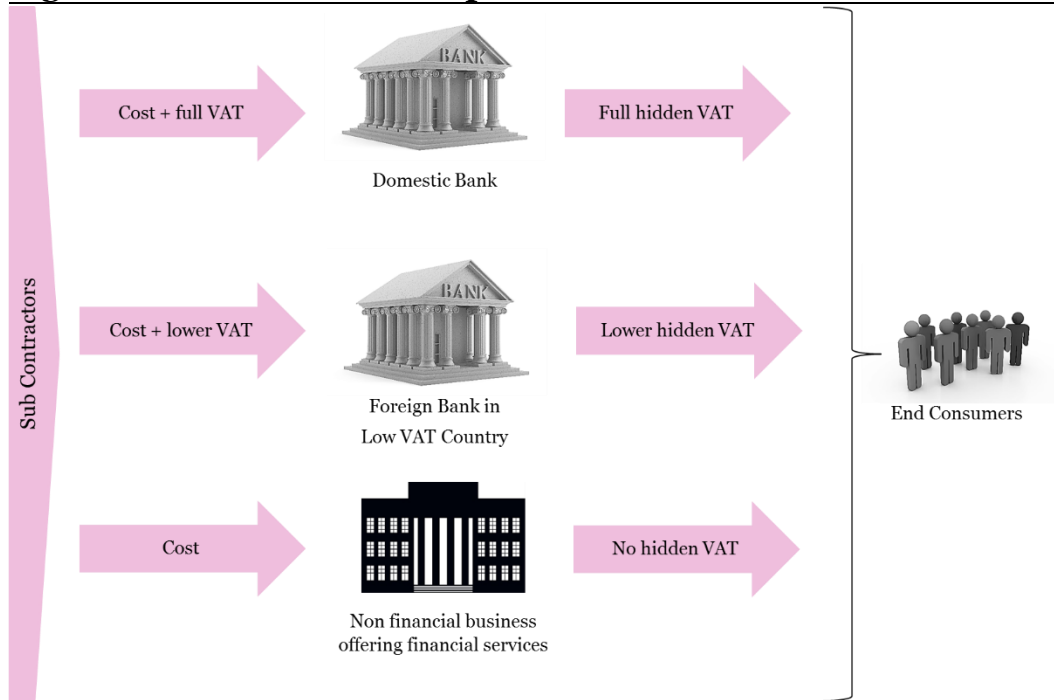
1.7 Distortions in the competition between domestic and foreign firms

In countries with relatively high VAT rates, the VAT-exemption also represents a cost-disadvantage vis-à-vis foreign competitors. The reason is that higher VAT rates result in higher cost of non-recoverable VAT for banks and higher rates of hidden VAT, see the upper part of Figure 6.

First, this mechanism distorts competition in the international market for financial services, since banks in countries with lower VAT rates have lower costs, allowing them to provide lower prices. This problem has increased in recent years, especially given the increased use of online banking, making the physical location of banks less-and-less important.

Secondly, to the extent that firms still use domestic banking services, firms in low-VAT countries will face lower cost of financial services compared to firms in high-VAT countries, which also result in unfair competition.

Figure 6 Distortions of Competition



Note: VAT may distort competition between banks in different countries as well as between banks and non-financial businesses that offer financial services. Viewed purely from a VAT perspective i.e. ignoring other costs, and assuming that the domestic VAT is higher than the foreign VAT the domestic bank will be subject to a higher non-deductible VAT cost and will therefore set a higher price on its final products than the foreign competitor, placing the domestic bank at a competitive disadvantage. Furthermore the domestic bank is also competing with non-financial businesses offering financial services, these businesses can fully deduct VAT and can therefore offer a lower price, including no hidden VAT at all.

Source: Copenhagen Economics

Sometimes, non-financial firms also provide financial services. However, in doing so, they typically do not face the same costs as banks in terms of non-recoverable input-VAT. This gives them a competitive advantage; see the lower part of Figure 6 and the example in box 1.

Box 1 Car Sellers: an example of competitive distortions

The car market is one example of a competition distortion between financial and non-financial firms. Car retailers often offer their customers to pay-off the car over several years, i.e. they offer them a loan. However, car retailers' main product (cars) are not exempt from VAT. Hence, in contrast to banks, car retailers do not have costs related to non-recoverable input-VAT and their prices on financial services will not include hidden VAT. Therefore, they have a competitive advantage compared to banks.

Chapter 2 Elements of a full VAT model

The failings of the present VAT system was identified in chapter one. We think ultimately that the main challenges relate to two issues. Firstly, defining a precise tax base corresponding to the net interest income that banks and other financial institutions earn, and secondly making sure that the VAT applies to credit provision from all possible sources, domestic as well as foreign. In this chapter, we develop our vision for a full VAT system for the entire financial sector which delivers on these two challenges.

We start off by explaining the key drivers of the net interest income of banks (2.1). We then proceed by laying out our proposed VAT solution for credit providers, including a calculation of the effect of VAT on borrowing costs of households (2.2). We then come up proposals to make the VAT system robust to regulatory leakage and avoid that non-financial firms and foreign financial firms escape the VAT (2.3) and some reflections on problems in making distinctions between business and consumer demand for credit (2.4).

2.1 Determination of spreads between lending and borrowing rates

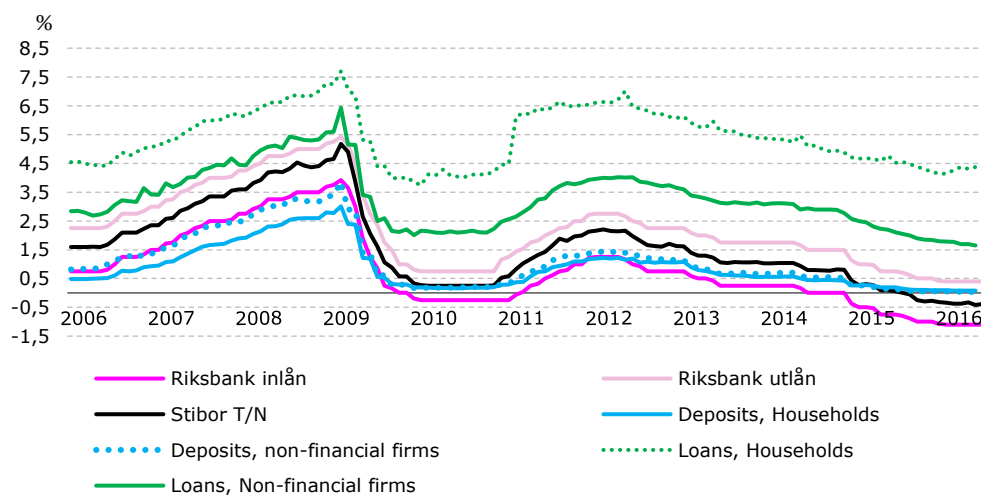
The essence of credit provision is intermediation where banks borrow funds and then lend to firms, households etc., earning a margin in the process.

The margins or spreads between lending rates and funding rates are basically driven by four key cost factors. Firstly, banks have infrastructure costs associated with taking in funds and passing them on to customers. Examples are buildings and IT-systems. Secondly, banks incur costs as they evaluate the credit worthiness of individuals or groups of customers, that is, their likely ability to pay back loans at the agreed rate of interest. The evaluations require use of real resources up front, but also during the lifetime of the loan in order to monitor customer behavior and reduce credit losses (so-called “agency costs”). When these efforts turn out to be insufficient, banks face losses due to default and costs associated with collateral seizure. Banks weigh the evaluation and monitoring costs against those losses in order to find the right level of vigilance, and typically opts for more evaluation and monitoring in case of riskier loans with higher loss probabilities. As a result, the spread between the funding and lending rates of the bank is larger for riskier loans. Thirdly, the spread also reflects a maturity transformation in that banks typically lend long-term while funding the loans at the cheaper short end of the market. This involves compensation for liquidity risks and risks associated with changes in interest rates. Fourthly, banks face costs related to capital and liquidity requirements that constrain the funding options to the more expensive ones.

A review of Swedish funding and lending rates over the last 10 years provide a perspective on this discussion. Firstly, short term funding rates for banks with credible credit ratings

are close to central bank rates. In fact, in the last 10 years the interbank rates at the short end of the market have been in the narrow corridor between the deposit and lending rates of the Riksbanken, in line with basic rules for monetary policy management. Secondly, the interest rates on deposits are typically below interbank and central bank lending rates, in line with the fact that compliance costs from deposits are much higher per unit of funding. It is only in the extraordinary interest rate environment from 2009-2010 that the pattern reverses. On the other hand, the lending rates of the banks are always much higher, precisely reflecting the four cost factors described above. Lending rates for households are much higher than for enterprises reflecting both higher loss probability but also higher agency costs per krone in loans, cf. Figure 7.

Figure 7 Short term interest rates in Sweden, 2006-2015



Note: Stibor T/N is the Swedish interbank Tomorrow/Next rate. The deposit rates are for new checkable deposits (overnight deposits) in SEK provided by credit and other institutions (MFIs except MMFs and central banks). The loan rates are for new revolving loans and overdrafts, and convenience and extended credit card debts, in SEK and including all maturities, provided by credit and other institutions.

Source: Sveriges Riksbank, the ECB, Thomson Reuters

The loan and deposit rates with the Riksbanken as well as the short term interbank rates are often referred to as the short term risk free interest rate, especially the deposit rate that banks earn on short term deposits with the central bank. For the rest of this report, we stick to this tradition and use the deposit rate with the central bank as a proxy for the return savers can get on completely risk free investments⁵.

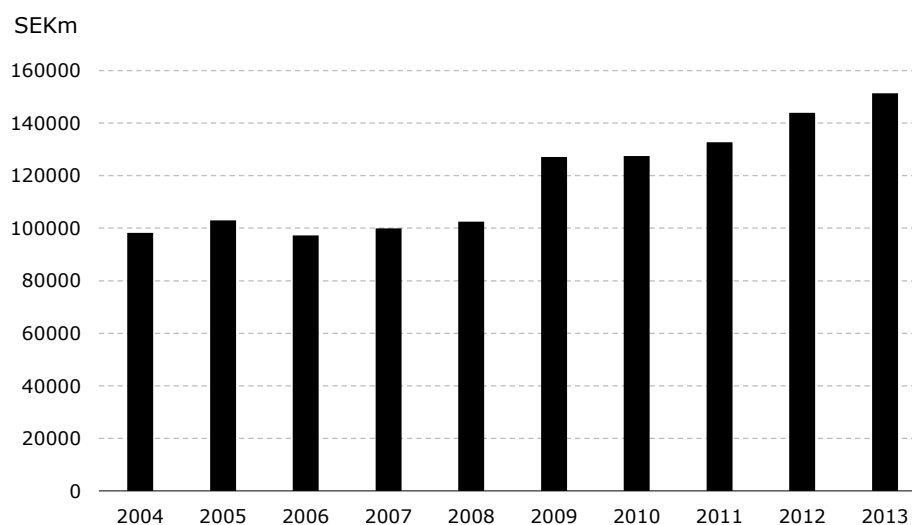
Summing up, it makes sense to see bank credit provision to households and enterprises as a process where banks borrow at rates close to the short term money market rates (from

⁵ An important part of the financing of banks comes from deposit taking with very short maturity. For big Swedish banks such as Swedbank and SEB, the short term deposits accounted for 18-31% per cent of total funding in 2015. Yet, the deposit rate with the central bank is arguably more important as it captures more closely the concept of a risk free rate.

other banks or by way of deposits) and then lend with a margin to individual customers based on a credit assessment, the size of the loan, and possible risks related to maturity transformation.

In the national accounts, the intermediation output of the banking sector is calculated in a way that reflects this view, namely as total gross revenues from interest income (on a net basis for the sector as a whole) minus interest expenses on funding, the latter approximated by the amount of funding multiplied by a short term funding rate such as the interbank rate. The total output of the banking sector calculated by this method is depicted below. It includes the intermediation output as well as some services provided by banks that are paid for in fees. In Sweden, it has increased from around SEK 10 billion in 2004 to plus 14 billion in 2013 cf. Figure 8, outpacing nominal GDP growth in this period (3.3% versus 4.9% by official SCB statistics).

Figure 8 Gross income generation from credit provision in Sweden, 2004-2013



Note: Total production of banks and other credit institutions in Sweden, current prices, base prices. Total production includes the value of intermediation services measured as the interest received on loans minus funding costs, plus gains on deposits when they are placed in the capital market minus the interest expenses on the deposits.

Source: Statistiska Centralbyrån

2.2 Characteristics of a full VAT model on credit provision

We are looking for a simple tax model where all consumers will be presented with an invoice where all value added required to produce a financial service is subjected to VAT. The consumer need not know anything about how the total bill came about, i.e. what the costs

and margins were of different upstream suppliers. This is exactly what happens when you go for a haircut: the customer does not know how the bill is split into rentals, shampoo, salaries to employees, interest charge on bank loans and what remains as a profit for the owner. The same should apply to a bank customer. The VAT should not depend on any assumption about marginal funding costs neither in money markets nor in the way it draws on the internal resources of the bank.

VAT also should be charged by all institutions providing financial services. In other words, when the car dealer or the department store offers a loan to pay for the new Ford or the new expensive freezer, VAT should be applied to any value added associated with this financing service. This is in line with the provisions in the current VAT directive where, at least in principle, the application of VAT to certain specific financial services depends not on the legal status of the provider but on the character of service rendered.

We are also looking for a model that does not create new distortions. Firstly, it should not affect how financial institutions charge their customers. There are two principle ways in which banks earn money; by charging an interest margin between outgoing loans and deposits, and by charging fees and commissions on other financial services. A well-functioning VAT model should not distort the incentives faced by the bank (or the customer) when deciding on a remuneration composition. Secondly, the model should ensure that the bank does not have a tax incentive to either outsource or insource its funding by over-relying on either customer deposits or on drawings on own deposits with the central bank.

Finally, the model should ensure that VAT-registered customers receive a full refund for VAT costs, and private consumers should pay full VAT.

So we need a functioning model that in a practical way deliver on three key requirements:

- VAT should be charged on *all the value added* associated with credit provision *for all institutions* providing credits to consumers and businesses
- Allow *full recovery for VAT registered customers* and *full cost pass-through for consumers*
- Ensure that funding decisions of financial institutions are not distorted

As we will show below, these requirements are very much linked.

2.3 Our pragmatic solutions

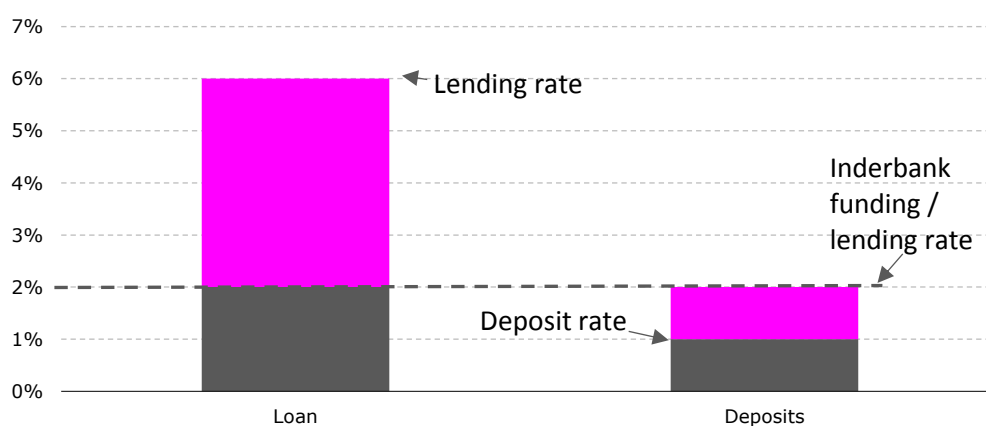
Our basic solution is to let the tax base equal the total outgoing bill, i.e. gross interest charge plus potential special charges, minus the risk free interest rate measured by the central bank deposit rate. This follows from our basic idea about the formation of market rates with the risk free nominal rate as bottom layer and intermediation costs forming the value added costs on which VAT should be charged.

We would also suggest that such a solution removes all concerns about disclosure of proprietary information in the way that banks and financial institutions price their products

that has been put forward as critical aspects of VAT models for the financial sector⁶. All the financial provider is providing to the customer is the VAT charge which is calculated based on the actual interest being paid, a price that is certainly known by the customer, with a deduction which is equal to the central bank discount window rate which is published each day.

It is also consistent with the basic approach of how to measure gross value added in credit provision. As described above, the system is based on the FISIM calculations in the national accounts, where any loan involves a service equaling the difference between the interest rate charged on the loan and the central bank deposit rate. When this difference is positive (which is typical for most loans given by banks to private consumers), the lender provides a service to the borrower. When this difference is negative (which is typical for most loans given by private consumers to a bank, i.e. private consumers bank deposits) the borrower is providing the lender a service, see Figure 9.

Figure 9 FISIM calculations



Source: Copenhagen Economics

We do recognise that direct marginal financing costs may in certain cases be lower than those associated with running down deposits with the central bank. Indeed, as is clear from both figure 7 and 9, the deposit rate offered by the central bank may in fact be higher than the rates on deposits.

However, we stick to the view that the outgoing VAT payment should not be affected by the marginal financing decision by the bank: indeed the lower deposit rate reflects the fact that banks incur more costs per unit of financing when it is drawing on a huge number of small deposits as opposed to running down deposits with the central bank.

Using this principle would in the period 2006-2016 have added 1/2 to 1 percentage points to an average household loan rate in Sweden. This is a very simple calculation, where we

⁶ See for example Merrill (2011).

just apply the Swedish VAT rate of 25 per cent to the tax base of 200 to 500 basis points in the period cf. figure 7. The average household interest rate in the period was 5.4%.

This leaves us with the issue of how to calculate the total VAT bill of the bank. We need a model ensuring that the bank does not have a tax incentive to either outsource or insource the funding by relying on customer deposits, reducing its own deposits with the central bank or any other funding. For this purpose, we have compared five alternatives using the January 2015 interest rates shown in figure 7 and the current VAT rate of 25 per cent⁷.

- **Central bank financing:** Bank A runs down its deposits with the central bank. In this case, the outgoing VAT is equal to the interest rate charge minus the central bank deposit rate multiplied by the size of the loan.
- **Wholesale (interbank) funding:** Bank A finances the lending by borrowing in the wholesale market, and some other Bank B provides the loan by running down its deposits with the central bank or by using some other source of funding. In this case, the total VAT base and payment of the final customer will be the same as with central bank financing but the VAT bill is split between two different VAT-subjected banks. This is because the VAT bases of Banks A and B are also split – the base of Bank B providing the wholesale financing equals the difference between the wholesale market rate and the deposit rate with the central bank, and the base of Bank A providing the loan to the final customers is its lending rate minus the wholesale funding rate.
- **Consumer finding** Consumers are not and should not be VAT-registered and hence not charge VAT on their lending to banks. Hence, Bank A has no incoming VAT on interest expenditures but will be allowed to deduct a default incoming VAT bill corresponding to interests paid on central bank deposits. So even if Bank A's funding rate is above its risk free deposit rate, it will not reduce its overall VAT bill by taking in more deposits.
- **Financing from non-financial corporates:** If they are engaged in substantial lending activities, non-financial corporates will be included in the VAT system for financial services, and they will charge VAT on their lending activities. This is essentially identical to the case where funding is as in the wholesale market. Otherwise, funding from non-financial corporates will be treated as consumers, i.e. as if funding came from central bank deposits.
- **Equity financing:** Let us just assume that shares are owned by households who then receive dividends and capital gains on which no outgoing VAT is charged, just as well as households are not sending the bank an invoice when they earn interests on their deposits. With no incoming VAT, the bank just subtracts the central bank deposit rate.

With such a setup, the VAT tax base would be straightforward to calculate. It would equal gross interest income and other income sources (such as fees) minus the proxies above for the short-term risk-free interest rate. In Table 1, we calculate the VAT costs per unit of loan for the 5 funding modes, using the January 2015 interest rates shown in Figure 7 above, a VAT rate of 25%, and an assumption of no fees. The VAT rate of 25 % is charged to the

⁷.

difference between the interest rate charged to the customer of 4½% and the central bank deposit rate of -0,8 giving a tax base of 5,3% . This results in a 1.3 per cent VAT surcharge per unit of customer loan and, with our principles, independent of the funding.⁸

Table 1 VAT on customer invoice and net VAT liabilities by source of funding.

Level and distribution of the actual VAT payment	Actual or assumed provider of funding to bank A				
	Central Bank (- 0,8)	Whole-sale(bank B) (1)	Consumer (0,2)	Non-financial corporates (0,1)	Equity financing
VAT to customer with interest rate on loan 4½%	1,3	1.3	1.3	1,3	1,3
Net VAT paid by bank A	1.3	0.9	1.3	1.3/0.9	1.3
Net VAT paid by funder	0	0.4	0	0/0.4	0

Note: The table shows SEK for a loan of 100 SEK and interest rate of 4,3 % (funding rates in percentage points for bank A providing the loan to the final customer)

Source: Copenhagen Economics, Sveriges Riksbank, the ECB, Thomson Reuters

However, the net VAT liability would be spread differently in the different situations. With central bank, consumer and equity financing, the bank would have no incoming VAT and hence be liable for the entire VAT payment. In table 1, this is illustrated by the fact that the entire VAT payment of 1,3 SEK for a loan of 100 SEK is collected by bank A providing the loan to the customer.

With wholesale funding or funding from a non-financial corporate treated as a financial institution, the net VAT payment would be split between the bank and the institution providing the funding as clear from the table above. For the non-financial corporate, we have made a distinction between the two cases outlined. If the non-financial corporate is registered as a credit provider, then it will collect VAT on its own margin, here 0,4 SEK if not the entire VAT collection takes place at bank A.

The beauty of this system is that the final VAT paid by the customer is completely independent of the value chain of funding. It does not matter whether the bank sources its funding from deposits, from wholesale funding, or indeed from any other source: total VAT due through the value chain is the same while its contributions from the various parts may change.

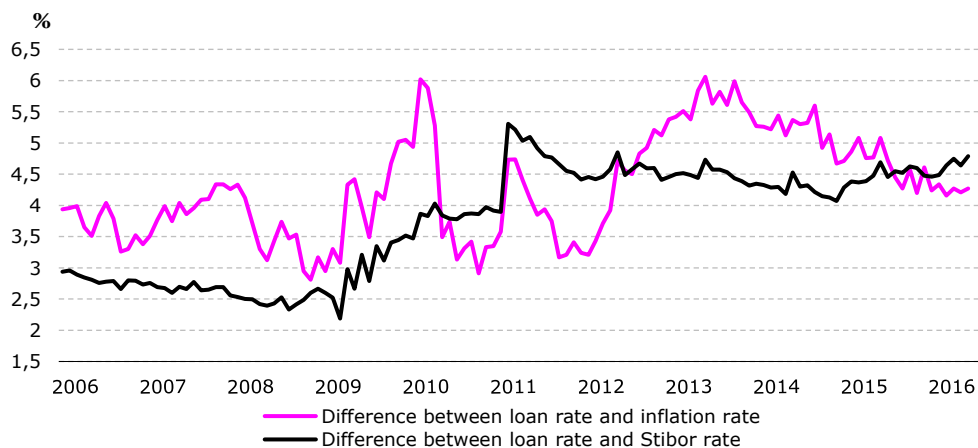
The other requirements of a good VAT system are satisfied as well. Firstly, it is quite comprehensive since it includes all the five funding alternatives (see also Section 2.3 below). Secondly, it does not create new distortions, as neither the bank nor the customer has any interest in splitting interest and fees in any particular way to reduce the VAT-bill, since they both enter the VAT base in the same way. Thirdly, our VAT solution eliminates existing distortions, as VAT-registered customers will be able to obtain a VAT refund, while the tax advantage of private consumers will cease.

⁸ We know that the current interest rates are partly distorted by the current VAT system for example that hidden VAT from input costs needs to be recovered by having higher interest rates. All other things equal, observed net-of-VAT interest rates would be lower as banks would be able to recover input VAT. This is however not central for the example

Our VAT model has a number of other robust qualities. First, structural changes in the nature of credit provision which either increase or decrease resource use associated per unit of loans provided will tend to be reflected in the tax base in a natural way. For example, if banks find ways to cut total agency costs per unit of loans provided, then given sufficient competition the tax base per unit of loan is also reduced. Secondly, it is also robust to changes in the structural level of the risk free real interest rate that would tend to affect funding and lending rates in roughly symmetrical manners. Thirdly, it also tends to provide a tax base per unit of loans that is relatively stable over the business cycle as shown in Figure 10 below: the difference between the household lending rate and Riksbankens deposit rate has remained very stable since 2005, roughly moving in a band of 200 to 500 basis points.

For good measure, we have compared our proposed tax base to an alternative of subtracting not the risk free funding rate but actual inflation from the lending rate. While inflation and the short term nominal funding rate are related over time and hence deliver comparable tax bases, we find that the short term risk free funding rate is the better choice. It provides a more stable tax base over the business cycle and will not move up and down with changes in the real risk free interest rate.

Figure 10 Stability of two possible tax bases, 2005-2015



Note: The loan rate is the interest rate for new revolving loans and overdrafts, and convenience and extended credit card debts, in SEK and including all maturities, provided by credit and other institutions to households. The inflation rate is the KPI (Konsumentprisindexet).

Source: Statistiska Centralbyrån, ECB

Finally, as a practical matter, in the above description we have implicitly assumed that each interest payment would lead to a separate invoice as inherent in the standard VAT-system. The literature has often suggested an account based collection system as opposed to the traditional transaction-by-transaction system (the tax collection system or TCA). The tax liability would then be determined on a periodical basis. It would certainly reduce the number of taxable events, but the advantage of such a reduction was probably much larger when computing power was not as developed.

2.4 A further simplification

For complicated B2B financial transactions, such as financial derivatives, it may prove difficult to establish the VAT base. This applies both to funding to the bank providing the final services to customers as well as the services provided by banks to business customers.

Hence, why not go for zero rating instead of exemption for B2B services. It will allow the bank to recuperate all incoming VAT, and hence remove hidden VAT from services provided to business customers. Indeed as discussed in chapter three such systems are in place in non-EU countries. It would also imply that incoming VAT on funding would always be zero, and hence that banks would have no interest income related VAT to deduct when calculating their net VAT liability.

This could then be combined with a simplified system for private consumers ie. not VAT registered customers. As private consumers by definition have no outgoing VAT payments, they do not need an invoice with an incoming VAT payment to deduct.

We could therefore rely on a more macro based assessment of banks net VAT liability associated with providing credits to private customers. Essentially, the VAT base for the bank would consist of all booked interest income on their loans to private customers minus calculated funding costs (the same consumer loan stock multiplied by the central bank deposit rate) and minus incoming VAT from purchase of inputs such as IT equipment, software, physical infrastructure etc.

We would expect the incidence of this VAT payment related to private consumers to be much the same as for any other costs link to financing. The higher the costs associated with providing a particular service, the higher would the increase in the price charged to the customer. This expected result follows from our basic belief that banks broadly know the cost structure related to different types of services provided. Indeed, banks base their loan rate decisions on such calculations: we do not really see that final price for credit provision for consumers should depend on whether the VAT-payment actually appears on the bank statements as opposed to the bank simply raising the charged interest rate so as to cover the underlying VAT liability.

2.5 What is business and consumer demand?

The basic premise for the discussion of consumers being undertaxed on their use of credit intermediation services is that it constitute private consumption. We deal with this in a practical manner by saying that making a distinction between VAT registered customers which and non-VAT registered customers.

This may in certain cases be misleading. This applies in particular to situations where other parts of the tax system *may* provide compensating taxation. One example is consumers making a choice between rented or owner occupied accommodation. In the first place, the landlord may use a bank to provide financing for the construction/purchase of the property

and then letting an apartment to the tenant. In this case, the landlord gets full VAT recovery on the construction costs of the property – and with our system recovery of the VAT charged on the interest rate – while the tenant is charged with VAT on rent. If the tenant instead build her own property, there would be no recovery of VAT paid upstream and also no VAT paid on the rent to herself. But most countries including Sweden impose a tax on owner occupied taxation as some kind of proxy for the value that the house constitute for the owner. The key issue here from a total economy perspective is whether the entire income and VAT system under or over tax owner occupied accommodation: this will very much depend on effective rate of taxation of owner occupied accommodation.

How to deal with lending/funding from non-financial and foreign sources

To have a viable tax system, it needs to be comprehensive and robust to regulatory “leakage”. In other words, it needs to cover all substantial sources of lending to consumers irrespective of the characteristics of the lender so that the introduction of the VAT does not lead to consumer lending being provided by VAT-exempt institutions.

In the first place, we need to ensure that firms competing with banks in providing consumer finance are covered. This is e.g. consumer credit units within large department stores or car dealers who provide credit in order to finance purchases of consumer goods and services. The consumer is already paying VAT on the purchase itself but should also pay VAT on the real resources involved in providing the credit. This requires that tax authorities, based upon a criterion of economic significance, implement a system where such firms are subjected to VAT on exactly the same principles as “normal” financial institutions. This has also been the idea of the system used in Denmark today. The specific tool is the so-called *Lønsumsafgift*, i.e. a wage bill tax that is applied to all firms providing VAT exempt services in Denmark. In Box 2 below we explain the principles of the Danish system. Also we explain why this model is not a good solution to the problems at hand, as it creates more new distortions than what it removes.

Box 2 The Danish tax on wage bill for VAT exempt enterprises

In Denmark, the general rule is that firms providing VAT services pay a tax on their wage bills. For instance, firms in the healthcare sector (e.g. doctors, dentists, and chiropractors), the financial sector, education, cultural services, and taxis all pay between 3.5% and 13.6% of the total wage bill including bonuses. The idea is that firms providing VAT services should not enjoy a tax advantage relative to the non-exempt firms, and the wage bill tax is calibrated accordingly.

However, there are several critical problems related to the Danish wage bill tax. Generally, it is focused on the solving "the tax revenue" problem, while the other problems related to the VAT exemption of financial services are even slightly increased.

The first problem with the wage bill tax is that it compounds a tax disadvantage of business customers arising from the VAT exemption. Business customers face higher prices on financial services due to the fact that financial institutions, as exempt entities, pay VAT on their inputs. The extra tax expenses are recovered through higher prices, and the wage bill tax just increases the prices further.

The second problem with the wage bill tax is that it distorts competition. That is both between domestic banks and other domestic firms providing financial services (e.g. consumer credit from car dealers), and between domestic bank and foreign banks, if the latter are not subject to a wage bill tax.

Thirdly, certain labour intensive processes that ideally were kept in-house might be outsourced in order to reduce the tax expenses.

The final problem is practical. It is hard to calibrate the wage bill tax to match what the firms would have paid had they been non-exempt. This is especially problematic for firms offering both exempt and non-exempt services. It is a practical challenge to trace what shares of the wage bill were due to each kind of service, and the judgement is to some extent arbitrary.

Source: Copenhagen Economics, www.skat.dk

In the second place, we would need to deal with lending from foreign sources. For all foreign firms whose lending is provided from Swedish branches, our VAT system as described above would apply. There would be no need of special rules. Where there is a need for supplementary legislation is when lending is provided directly from abroad with no Swedish legal intermediary. Here, we suggest that the system should be built upon the destination principle, embodied in general EU principles for providing cross border services to consumers and applied from 2015 onwards.

As a general rule, we would think that the incentives for foreign credit providers to be compliant with Swedish rules are relatively large in practice. Credit provision requires an assessment of the borrower's creditworthiness, which again requires a firm of certain size and

scale that would be hesitant in running reputational risks. Furthermore, for loans above a certain size, collateral is often required, e.g. in purchases of larger consumer goods or real estate. It would in turn be a relatively risky business for the foreign firm to be registered in Sweden as having collateral in cars, houses etc. and then not having charged VAT on the loans associated with the collateral. Ultimately, the customer can be held accountable for the VAT liability. This is in contrast to the much more substantial compliance problem associated with cross-supplies of such services as e-books, games, music where the transaction price is often small, involving non-repeated sales-purchases and no relation between customer and seller after the conclusion of the purchase⁹. All in all, we suggest that foreign sources of credit to private consumers would in fact choose to add VAT to their interest bill for these reasons.

⁹ For a description of the problems associated with compliance with e-services to private customers in the EU under the destination principle see e.g. Copenhagen Economics (2011).

Chapter 3 Alternative VAT Models on the table

The preceding analysis identified essentially seven distortions arising out of the current system which are summarised below in the horizontal dimension of Table 2. As these distortions have been identified and discussed for decades, a number of reforms have been proposed to address them and some of them have indeed been put in place in some countries. The key variants are listed below, also in the horizontal dimension of Table 2.

What we will demonstrate is that none of these reform variants solve all the distortions, although putting together some of the reforms in packages will go a long way.

Table 2 The alternative VAT-models for financial services

Taxation Method	Tax Base	Solve distortions						
		1. Bias against outsourcing	2. Higher costs for non-financials	3. Lower cost for consumers	4. Compliance costs	5. Competition: domestic	6. Competition: abroad	Even out tax advantages
Zero Rating (NZ)	Financial services (negative)	x	x	÷	÷	x	x	÷
Partial Recovery (AUS & SIN)	Financial services (negative)	x	x	÷	÷	x	x	÷
Partial VAT models	Certain financial services	(x)		x	÷	x		
FAT 1 (DK)	Value added (EBIT + gross wages)		÷	x	÷	÷	÷	x
Optional VAT models (NO & EU)	Tax on margin income	x^a	x	x	÷	x	x	x
Full VAT system	All financial services	x	x	x	÷	x	x	x

Note: All incoming-VAT is a marginal cost for a bank as long as they do not have enough outgoing-VAT to reclaim all their ingoing-VAT

3.1 Zero-rating and partial recovery models

The first type of approach can be exemplified by the so-called **Zero rating model** used in New Zealand. Here, financial institutions are (partly) brought into the VAT system, but with a zero rate on their “sales”, i.e. they are allowed to refund the input VAT related to the production of VAT exempt services. This reduces costs for banks because they now end up with a negative VAT balance: Incoming VAT is zero as for all other VAT-registered businesses, and since the value of inputs is typically lower than the value of outputs, the financial institutions end up paying less in VAT. This solves two distortions: it removes the bias towards in-sourcing, and business customers no longer pay hidden VAT.

However, in order to avoid the distortions related to consumers paying too little for financial services already, such models typically require that only VAT arising from activities linked to business services can be refunded. If this restriction is not put in place, private consumers will pay no VAT incurred in any part of the value chain. This implies a new compliance burden following from the need to split activities into services provided to VAT-registered and non-registered traders. Furthermore, by reducing VAT recovery to activities linked to serving VAT-registered customers, some of the insourcing bias remains.

Another system is the partial recovery system that allows recovery of input VAT based on fixed estimates of the shares of services provided to VAT-registered customers. It is used in Australia and Singapore. It is a less accurate way of addressing hidden VAT for business customers than zero rating, but the compliance cost associated with splitting input VAT between services provided to VAT-registered and non-registered customers is avoided.

The partial recovery and zero rating systems show that there is trade-off between compliance cost and accuracy in any full VAT model aiming for eliminating hidden VAT for businesses. Precise and full recovery of hidden VAT always comes at a price - increasing compliance costs for banks as they spend resources to estimate the share of input VAT linked to different customer groups.

3.2 VAT on fee based services

The second type of approach is to apply VAT to specific financial services, typically fee-based. The EU's 6th VAT directive supports this approach. The merit of it is that it actually applies the VAT to some financial service products and hence allow VAT input recovery for business and full VAT cost charging for consumers.

A partly solution would be to move more in this direction, and allow / give banks incentives to split up their current large interest margin into a service fee (which is VAT liable) and a lower interest margin (which still is not VAT liable). As a larger part of the financial services is payed for in fees, which is VAT liable, the VAT expenditures and distortions in the system become smaller.

The disadvantage of VAT on specific financial services is the need to account for the inputs that are used in the provision of VAT-exempt and non-exempt services. This is costly and, at the EU level, it may distort competition, given more frequent problems of reconciling different national practices on the definitions of what is tax-exempt and what is not. An acute issue is the uneven application of the VAT exemption of financial services such as payment facilitation, which sometimes distorts choices of suppliers. Given the slow progress on the EU proposal to deliver clarification and modernisation of the VAT treatment of the financial sector, more "soft" guidelines could push Member States towards practices that define what is exempt and what is not. This might level the playing field for providers, reducing distortions in financial service provision, also across countries.

3.3 Taxes on value added in financial institutions

The third and in principle more radical approach is a specific tax on the value added inside the financial institution. In the literature it is often referred to as a FAT1 (Financial Activity Tax). A variant of it is applied in Denmark, namely a tax on the wage bill of all VAT exempt enterprises. In the classical FAT concept, the tax base can more or less be derived from the tax accounts of the banks, namely as taxable profits plus wage costs and capital depreciation. The merit of the approach is that the cost of services provided to private consumers goes up, alleviating the tax advantage enjoyed by them in the exemption system. The calibration of the tax rate can be set in such a way as to ensure some commonality with a full VAT system in terms of increased costs for consumers. By the same token, insourcing bias is also reduced.

Overall, it is unclear whether such a tax actually improves economic efficiency, for a number of reasons. First, the pre-existing distortion towards business customers increases as the higher costs associated with the levy – in contrast to a real VAT model – cannot be recovered. Secondly, the FAT or variants thereof is a tax in a given tax jurisdiction. So it clearly distorts cross-country competition. This may be relevant especially in commercial banking where customers tend to have easier access to cross-border credit and financial services. Thirdly, it also requires measures ensuring that VAT-registered enterprises providing credit as a side activity are also taxed. Examples include non-independent consumer credit entities established by companies selling consumer goods such as cars and electrical appliances where credit is provided to finance a specific sale. Such tax measures has indeed been put in place in Denmark, but not without substantial compliance costs and with likely remaining distortions of competition.

Tax on gross interest margin

A tax on the gross interest margin would be even closer to the true tax base of the full-fledged VAT model than the frequently discussed FAT (or wage bill tax). Such a model is currently discussed in e.g. Norway. However, the key issue is still whether the VAT can actually be applied also to credit services provided from non-domestic sources ie. addressing the cross-border distortion. This is essentially what we propose above in chapter 2.

3.4 Our take on the pros and cons of different models.

The various models can be combined to get some joint benefits. For example, one could combine a zero rating model with a VAT-like tax on a tax base of net interest income from credit provision to households and associated input costs. This would reduce distortions associated with:

- Too high costs of business loans.
- The insourcing bias.
- Too low costs of household credits.

Unresolved distortions:

- Compliance costs and possible distortions linked to the need of calculating what part of the input costs is linked to households

- How to include non-domestic credit and service providers and domestic, non-financial but VAT-registered companies providing consumer credits.

The only model that solves all problems will still be the full VAT model, for which a simple version is described in chapter two.

Hence, we suggest that this is the model that Sweden and other EU countries could explore in future reforms of the VAT system. In this context, the present “opt in model contained in the VAT directive for financial services described in chapter 1 should be changed to allow member states to implement *obligatory* VAT treatment of financial services. This would allow for some controlled experimentation. We fail to see that it should involve technical challenges and compliance costs higher than in the present system while it should dramatically improve economic welfare and reduce the economic distortions described in chapter one.

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