Applying VAT to financial services: Is the new “mobile-ratio method” adequate for insurance?

Otto A. Altenburger

Abstract Applying Value Added Tax (VAT) to financial services is difficult. Several more or less complex methods for handling financial services within a VAT system have been developed, none of them being fully satisfactory. In 2018, Julio López-Laborda and Guillermo Peña have published “A New Method for Applying VAT to Financial Services” in the National Tax Journal (vol. 71 (1), pp. 155–181), called “mobile-ratio method”. This paper examines whether the new method is adequate for insurance services. It reveals that the analogy between insurance services and other financial services, while amazing at first glance, does not reach far enough to make the “mobile-ratio method” practically applicable to insurance services.

Keywords Value added tax (VAT) · Insurance · Mobile-ratio method

JEL Classification G22 · H25
Die Einbeziehung von Finanzdienstleistungen in ein Mehrwertsteuersystem: Ist die neue „Mobile-Ratio Method“ für Versicherungsdienstleistungen geeignet?

Zusammenfassung Die Einbeziehung von Finanzdienstleistungen in ein Mehrwertsteuersystem ist schwierig. Dafür sind mehrere mehr oder weniger komplexe Methoden entwickelt worden, von denen keine voll befriedigt. 2018 haben Julio López-Laborda und Guillermo Peña im National Tax Journal (vol. 71 (1), pp. 155–181) „A New Method for Applying VAT to Financial Services“ veröffentlicht, die sie „mobile-ratio method“ nennen. Der vorliegende Beitrag untersucht, inwieweit die neue Methode für Versicherungsdienstleistungen geeignet ist. Die Analyse ergibt, dass die auf den ersten Blick frappierende Analogie zwischen Versicherungs- und anderen Finanzdienstleistungen nicht so weit reicht, dass die „Mobile-Ratio Method“ sinnvollerweise auf Versicherungsdienstleistungen angewendet werden kann.

Schlüsselwörter Mehrwertsteuer · Umsatzsteuer · Versicherung · Mobile-Ratio Method

1 Problem, aim, and structure of the paper

Applying Value Added Tax (VAT) to financial services is difficult. Due to the lack of an appropriate method for taxing them financial services are exempt from VAT in most countries which have established a VAT system, at least for the most part. This causes severe disadvantages, above all tax cascading because, as a rule, no input VAT relief is granted. Several more or less complex methods for handling financial services within a VAT system have been developed, none of them being fully satisfactory.

In 2018, Julio López-Laborda and Guillermo Peña—in the following referred to as the authors—have published “A New Method for Applying VAT to Financial Services” in the National Tax Journal (vol. 71 (1), pp. 155–181). It should solve all the problems of exemption, “be fully compatible with the credit-invoice method, and be simpler and more neutral than the different” other methods proposed, “should tax the consumption of financial services using the standard VAT rate, and should tax all financial services, not just those provided by financial institutions” (p. 165). They call it “mobile-ratio method”. As the authors cover all financial services they include insurance services while those services which are usually provided by banks seem to be the focus of their attention.

This paper examines whether the new method is adequate for insurance services. After explaining the new method including the authors’ original fictional example (Sect. 2) the mechanism of the method with insurance is shown (Sect. 3) using simple, but more realistic examples. Sect. 4 assesses the VAT consequences of the method when applied to insurance services. Sect. 5 summarizes and concludes.
2 The mobile-ratio method explained

The starting point for the considerations (pp. 165–167) is the so-called financial value added (FVA) “for” (business) entity j during the period t, consisting of the so-called financial margin (FM) plus explicit fees and commissions (“such as charges for brokerage services, trading in securities and foreign exchange”), minus “input costs”, and minus “investment”, equalling (following the addition method instead of the subtraction method) profits plus wages and salaries, plus “the cost of capital in the previous period”, plus amortization, minus investment. Subsequently, the term of main interest is the financial margin.

The financial margin consists of the interest or banking margin (“which includes the implicit margin of loans and deposits”), the insurance margin, and the “bid-ask spread (which reflects non-observable implicit fees for services such as forex transactions and derivatives, e.g., options, future contracts)”. Quoting Zee, the authors state that “the financial margin (or ‘imputed’ banking output) is also equal to the difference between interest receipts (e.g., loan interest, insurance premiums, gains from derivatives), $IR_{j,t}$, and interest payments (e.g., deposit interest, insurance claims, losses from derivatives), $IP_{j,t}$:

$$FM_{j,t} = IR_{j,t} - IP_{j,t}$$

They define the so-called total value of interest (TVI) “as the sum of all interest transactions, that is, interest receipts plus interest payments:”

$$TVI_{j,t} = IR_{j,t} + IP_{j,t}$$

Their proposal is to tax explicit fees and commissions directly, and to tax the financial margin “using a mobile-ratio approach”. “Under the mobile-ratio method, the tax base is constructed by applying the same ratio to each interest transaction. The ratio consists of the financial margin generated by financial services provided by” entity j “divided by the total value of interest of” this entity, both for the latest “quarter for which the information is available”; “in the initial quarter of activity ... the global ratio of the country from the previous quarter” would be used. To obtain the VAT amount payable by the entity, “investment and input cost credits” have to be deducted from “the VAT collected on the financial margin as calculated by the mobile-ratio plus the VAT collected on explicit fees and commissions”.

The authors illustrate the mechanism of the mobile-ratio method using a simple fictional example (before presenting a “real world” example with data from a Spanish bank). In this example (cf. pp. 168–170), a “Total of interests” (TVI) of € 300 results from € 200 interest receipts (IR) and € 100 interest payments (IP), leading to a mobile-ratio of one third (FM/TVI = € 200 – € 100/€ 200 + € 100) and, applying a standard VAT rate of 21%, a VAT amount of € 21 (21% of € 100 financial margin).

The € 200 interest receipts and the € 100 interest payments are interpreted fourfold:
as interest from the borrower (a firm) of a loan (of € 10,000) and interest to the depositor (a household) of the same amount;

- as life insurance premiums and claims;

- as payments from selling and buying a derivative (future contract) to and from different customers who afterwards sell and buy the same derivative at other prices so that one of them sustains a capital loss of € 170 and the other achieves a capital gain of € 70 (this case is not quite clear and difficult to understand in detail but that does not matter in the context of insurance); and

- as payments from selling and buying a foreign currency to and from different customers.

In the first and in the last case it can be calculated easily how the two bank customers involved contribute to the VAT amount of € 21: The depositor and the foreign currency seller have to bear € 7 each (€ 100 · 1/3 · 21%), i.e. get only € 93 instead of € 100. The borrower and the foreign currency buyer have to bear € 14 each (€ 200 · 1/3 · 21%), i.e. have to pay € 214 instead of € 200.

In the (life) insurance case the same numbers apply, but the two customers logic does not work. The authors do not address this issue or elaborate on insurance in their model—with one exception. They briefly mention the various mobile-ratios in the following footnote (17, p. 170): “This is an extremely simplified example. Individuals will pay VAT on premiums by applying the mobile-ratio in force in each period. When they receive the benefit, they will also pay VAT on it, applying the corresponding mobile-ratio. In our view, this constitutes an acceptable approximation to the taxation of the value added of each insurance contract. A notional ratio might have to be applied in the early years of a company’s activity to compensate for the imbalance between premiums and claims.”

3 Mechanism of the mobile-ratio method with insurance

In order to demonstrate the mobile-ratio method more clearly it shall be assumed that the financial margin does not equal the “interest payments” (as this is the case in the authors’ example just described) but falls short of them (which is the normal case with insurance). If, e.g., insurance premiums (“interest receipts”) amount to € 1200 and insurance claims (“interest payments”) to € 800 and the standard VAT rate is 20%, the mobile-ratio is one fifth (FM/TVI = € 1200 – € 800/€ 1200 + € 800), the total VAT amount is € 80 (20% of € 400 financial margin), a VAT amount of € 48 (€ 1200 · 1/5 · 20%) is due with the premiums (i.e. the policyholder has to pay € 1248), and a VAT amount of € 32 (€ 800 · 1/5 · 20%) has to be deducted from the € 800 claims (so that the policyholder receives € 768).

The reference to life insurance as well as the wording of the footnote cited above indicate that the authors think of policyholders who pay the premiums and afterwards receive “the benefit” themselves which is often the case in life insurance. If only one customer is involved it can be argued: He, as the consumer, shall bear the VAT on what he actually pays to the insurance company, that is the difference between premiums and benefit, in the last example on € 400 (€ 1200 – € 800), amounting
Applying VAT to financial services: Is the new “mobile-ratio method” adequate for insurance?

This result is—apart from timing or interest differences—correctly achieved by the mobile-ratio method.

This conclusion has to be questioned if the relation between premiums and benefit of a policyholder deviates from the overall relation from which the mobile-ratio is derived. Supposing a steady mobile-ratio of one fifth and a standard VAT rate of 20% (like in the last example), the following situations (all amounts understated for the sake of simplicity) result in the following VAT consequences under the mobile-ratio method:

1. Policyholder A takes out an endowment assurance. He pays €10 monthly premiums for ten years (altogether €1200) and gets a single benefit at the end of the contract period; this benefit amounts to a) €800 (like in the last example), b) €1200, c) €1500.

   VAT on premiums: €0.4 · 120 = €48
   VAT on benefit:
   a) €32 → net benefit €768
   b) €48 → net benefit €1152
   c) €60 → net benefit €1440

2. Policyholder A takes out the same endowment assurance, but dies after ten months. His heirs receive €800, the sum insured.

   VAT on premiums: €0.4 · 10 = €4
   VAT on benefit: €32 → net benefit €768

3. Policyholder B takes out a term assurance. He pays €2.5 monthly premiums for ten years (altogether €300) and survives the end of the contract.

   VAT on premiums: €0.1 · 120 = €12
   VAT on benefit: €0 (no benefit)

4. Policyholder B takes out the same term assurance, but dies after ten months. His heirs receive €800, the sum insured.

   VAT on premiums: €0.1 · 10 = €1
   VAT on benefit: €32 → net benefit €768

5. Policyholder C insures his house for ten years against fire, storm, theft, and other risks. He pays €2.5 monthly premiums (altogether €300) and gets indemnifications for damages occurred during these ten years amounting to a) €0, b) €300, c) €10,000.

   VAT on premiums: €0.1 · 120 = €12
   VAT on indemnifications:
   a) €0 (no indemnification)
   b) €12 → net indemnifications €288
   c) €400 → net indemnifications €9600

6. Policyholder C takes out the same contract for his house. After ten months without damages the house is completely destroyed by fire, and he gets €20,000 indemnification. The reconstruction of the house is delayed.

   VAT on premiums: €0.1 · 10 = €1
   VAT on indemnification: €800 → net indemnification €19,200
4 Assessment of the VAT consequences of the mobile-ratio method when applied to insurance services

Irrespective of its details any VAT system shall tax what (final) consumers pay for goods and services they consume or use personally—in contrast to the purchase of goods and services for economic activities (what is achieved by the mechanism of input tax relief). The VAT amount due is to be calculated by applying a certain percentage (the tax rate) to the sum paid by the consumer, i.e. the return received by the undertaking delivering the goods or rendering the services.

Insurance companies render the service of risk-bearing, sometimes combined with an explicit saving and capital investment process respectively. The parts of the premiums which are not used for risk-bearing, but are explicitly paid to be invested by the insurance company for the policyholder(s) do not represent a consumption, but a saving (possibly for later consumption). These parts of the premiums, therefore, shall not be charged with VAT.

The most important example of insurance coverage containing such an explicit saving component is endowment assurance. If the holder of an endowment assurance contract himself gets back a considerable part of the premiums he has paid (a part large enough to show the investment process but small enough to leave an adequate remuneration for the service rendered by the insurance company) the VAT consequences of the mobile-ratio method are more or less correct, at least appropriate or acceptable. This case is covered by version a) of example 1 in the previous section, which equals the introductory example before.

Assuming that € 400 is the right remuneration for the service rendered by the insurance company for ten years (and a standard VAT rate of 20%) € 80 is the correct VAT amount. This amount does, however, not change depending on the benefit received by the policyholder whereas versions b) and c) of example 1 show that the mobile-ratio method leads to VAT amounts increasing with benefits, regardless whether the “net payments” of the policyholder become nought or even negative.

Assuming the remuneration for the insurance company is the same for each period of time the VAT amount in example 2 in the previous section should be a twelfth of € 80 and not € 36 which is the result of the mobile-ratio method. The actual numbers may change if the remuneration for the insurance company is calculated according to the real mortality rates (increasing with increasing age) and/or the benefit exceeds the sum insured, but that does not alter the fact that the mobile-ratio method will not come up with adequate VAT amounts.

The assumption of € 400 being the right remuneration for the service rendered by the insurance company for ten years can be replaced by a correct calculation. The premiums for a term assurance (covering only the risk of death) for the same insured person, the same contract period, and the same sum insured represent the risk-bearing part of an endowment assurance. Examples 3 and 4 in the previous section show the VAT consequences of the mobile-ratio method if the term premiums amount to a quarter of the endowment premiums supposed before. If € 300 is the remuneration for the service of risk-bearing for ten years (and the applicable VAT rate is 20%) € 60 is the correct VAT amount whereas only € 12 become due under the mobile-ratio method. Accordingly, assuming the remuneration for the insurance company
is the same for each period of time (and not increasing with increasing age), the correct VAT amount in example 4 is a twelfth of € 60, i.e. € 5—and not € 33.

Examples 5 and 6 in the previous section reveal even more clearly the great variety of VAT amounts resulting from the mobile-ratio method depending on the extent of indemnifications following from a specific insurance contract while the service rendered by the insurance company, i.e. the risk(s) borne as agreed by the insurance contract, remains unchanged.

Probably the authors would reply that their method requires a common look at policyholders sustaining damages and receiving indemnifications respectively as well as lucky policyholders sustaining (low or) no damages and not receiving any indemnifications.

Based on examples 5 and 6 one could assume 100 policyholders paying € 300 premiums each (for identical houses) one of them getting € 20,000 whereas the 99 others do not receive anything because they do not suffer any damages. The mobile-ratio is still one fifth (FM/TVI = € 30,000 – € 20,000/€ 30,000 + € 20,000). Using the assumed standard VAT rate of 20% the total VAT amount is € 2000 (20% of € 10,000 financial margin), of which € 812 have to be borne by the one policyholder (€ 300 · 1/5 · 20% + € 20,000 · 1/5 · 20%) and € 12 (€ 300 · 1/5 · 20%) by each of the 99 others (€ 12 · 99 + € 812 = € 2000).

Bearing in mind that the insurance contracts in this example do not contain explicit saving components it can be stated without further considerations that each of the 100 policyholders should bear the same VAT burden because each of them consumes an identical service rendered by the insurance company at an identical price. The outcome of the mobile-ratio method deviates widely from this objective inherent in any VAT system. The problem cannot be solved by adapting insurance premiums and indemnifications to cover the sum of the tax burdens adequately because there will always be lucky and unlucky policyholders.

This deviation is so fundamental that other problems, above all varying tax burdens in spite of steady VAT rates, need not be discussed in detail.

5 Summary and conclusion

The so-called mobile-ratio method, developed by Julio López-Laborda and Guillermo Peña, is an innovative and interesting suggestion to solve the difficult problem of applying VAT to financial services. It may be suitable for such services which are usually provided by banks but does not work for insurance services.

The inclusion of insurance services in a VAT system remains an unsolved problem if it shall apply to insurance as a whole. New Zealand, Australia, and other countries have included non-life insurance in their VAT systems. But life insurance where many contracts contain explicit saving components still is waiting for an adequate solution of its inclusion problem.

Funding Open access funding provided by University of Vienna.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as
you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article’s Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

Selected Further Reading

Barham, V., Poddar, S.N., Whalley, J.: The Tax Treatment of Insurance under a Consumption Type, Destination Basis VAT. Natl. Tax J. 40(2), 171–182 (1987)

Cnossen, S.: A proposal to apply the Kiwi-VAT to insurance services in the European Union. Int. Tax Public Finance 20(5), 867–883 (2013)

Edgar, T.: The Search for Alternatives to the Exempt Treatment of Financial Services under a Value Added Tax. In: Krever, R., White, D. (eds.) GST in Retrospect and Prospect, pp. 131–161. Thomson Brookers, Wellington (2007)

Friedrich-Vache, H.: Verbrauchsteuerkonforme Umsatzbesteuerung von Finanzdienstleistungen, Plädoyer für die Abschaffung unechter Steuerbefreiungen. Dr. Otto Schmidt, Cologne (2005)

Holzheu, T.: Die Einbeziehung der Schaden-/Unfallversicherung in das Umsatzsteuersystem. VVW, Karlsruhe (2000)

Papis-Almansa, M.: Insurance in European VAT, Current and Preferred Treatment in the Light of the New Zealand and Australian GST Systems. Kluwer Law International, Alphen aan den Rijn (2017)

Poddar, S.: VAT on Financial Services – Searching for a Workable Compromise. In: Krever, R., White, D. (eds.) GST in Retrospect and Prospect, pp. 179–204. Thomson Brookers, Wellington (2007)

Schenk, A., Zee, H.H.: Financial Services and the Value-Added Tax. In: Zee, H.H. (ed.) Taxing the Financial Sector, Concepts, Issues, and Practices, pp. 60–74. International Monetary Fund, Washington, DC (2004)