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**COMPOSITE & DECOMPOSABLE
INDICATORS FOR EVALUATING RIA
SYSTEMS IN PRACTICE**

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**COMPOSITE & DECOMPOSABLE INDICATORS
FOR EVALUATING RIA SYSTEMS IN PRACTICE
Proposals for discussion and testing^{*}**

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Abstract

The spread in the adoption of RIA, sponsored by international organisations, will hopefully result also in an increase of its usage, by countries other than the few ones (mostly of Anglo-Saxon/common law tradition) where it is established since long. This, in turn, would render factual comparison of RIA national practices an exercise both meaningful and desirable, in particular for eliciting specific areas and pathways for improvement. This paper proposes a first attempt for the development of a statistical tool where basic measures and/or tests (i.e. individual indicators) are organised and grouped in composite indices addressing different dimensions within RIA. The latter can be variously combined, resulting also in more general, synthetic indicators, preserving the components' constituent elements. Due to current limitations in information availability, weights for aggregation are left undetermined in practice; the same reason impacts on selection of elementary indicators and the shape of composites, so that appropriate methodologies ought to be applied to get to a fully operational stage. A derived frame is also proposed, limited to a monetary perspective on the overall performance of RIA national systems, by means of a handful of key indicators which are less dependent on issues of aggregation. The whole package should thus be considered as an input for discussion, to be amended and eventually refined by testing for robustness and stability, starting from the information which is being collected in the international DIADEM database developed within the European Network for Better Regulation project.

First draft for comments

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Introduction

Extensive usage of RIA in support of evidence-based (or at least informed) policymaking is still limited to a few, mostly English speaking/common law based countries. However, this situation is likely to change in the near future, in view of the diffusion of the culture of governance and better regulation. This, favoured by the Oecd and the World Bank, in the last decade resulted in the adoption of RIA principles by a swiftly growing number of advanced economies and by some LDCs as well.

However, while the collection and analysis of comparable information on governance and regulation at the international level is by now advanced, the development of statistical tools for comparing the working of national RIA systems – at this point both meaningful and desirable to help improvements especially for ‘newcomers’ to RIA – it is still in its infancy.¹ An intense debate is already underway on good practices and key dimensions to be addressed also by means of indicators, and a relevant effort is being undertaken to collect comparable information, through the DIADEM database, on the features of RIA systems across Eu countries. Most information available or easily collectable on RIA practice, though, portrays specific characteristics and/or often assumes a y/n form. Hence we need treating it somehow, if we wish to achieve a more comprehensive view on the functioning of RIA systems.

This paper presents some suggestions on ways to organise information available (or which will be available in the near future) and on additional data needs, outlining a system of composite indicators for comparing RIA national systems on different aspects of quality, usage and effectiveness. It also proposes a derived, smaller set of key indicators targeting only the monetary dimension related to the usage of RIA. The paper consists of this introduction and five sections: section 2 introduces the

¹ With respect to regulation and governance at large and the development of (composite) indicators in these domains, it is worth reminding the World Bank programmes which led to the creation of two large databases for country comparisons. The first of these (World Bank 2004, 2006), rooted in the work by Simeon Djankov and few others, considers measurable data for different regulatory items which, in the last edition, include: *starting a business; dealing with licenses; employing workers; registering property; getting credit; protecting investors; paying taxes; trading across borders; enforcing contracts; closing a business*. The second, developed by the group led by Daniel Kaufmann (Kaufmann et al. 2003, 2005, 2006), instead, is based mostly on subjective perceptions on the quality of governance and includes: *voice and accountability,*

dimensions addressed in the analysis and the following discusses some general issues and the approach adopted; Sections 4 and 5 present the two sets of indicators; the last section draws some concluding remarks and topics for future research.

1. Conceptualising RIA and identifying domains and variables for evaluation.

A reasonable first step in designing an indicator (even more so a system of indicators) is to know what we want to track, and ask ourselves whether what we have at hand – duly arranged and put in shape – can do the job, and which additional pieces of information we might need.

In the case of the overall quality of RIA systems the concept is too wide to catch it easily (though still partially) by a single measure, maybe complex to compute, like GDP does for wealth. Hence, as the quality of RIA encompasses different dimensions, it is useful to first outline its main features, and identify within them the most important areas to be addressed by indicators.

To this end, drawing from contributions by various authors and of different nature,² we can outline a conceptual framework for analysing RIA systems based on common (chrono) logical macro-phases, identifying the three moments of *input*, *outputs* and *outcomes* or, borrowing from an other area of research, distinguish amongst RIA *readiness*, *usage* and *impact*,³ a quasi equivalent taxonomy, which allows adding to the former also an intermediate step of *process*. It is worth noting that this is only one way

political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption.

² Indirectly, it is rooted in works undertaken in other areas, such as the systematisation of Policy Impact Analysis with specific reference to innovation proposed by Roberti (2006) and the author's work on the development of a system of indicators for tracking the innovation policy process (de Panizza, 2006, from which some of the indicators proposed are derived). In a stricter sense, it builds on official reports and theoretical guidelines (including Mandelkern, 2001 and, subsequently, EC, 2005 and Oecd 2004a) as well as on previous analyses such as Oecd (2004b) and the few pathbreaking attempts at scorecards and indicators (Renda, 2006; Radaelli, 2003, Jacob *et al.* 2006, De Francesco and Radaelli, 2007, etc.) and the related design of the DIADEM database framework (Radaelli *et al.*, 2006). The paper is also directly indebted to (long discussions with) M. Visaggio, who provided inputs to the design of many indicators, besides theoretical reflections on the quality components of RIA systems now reported in Visaggio (2007). I would also like to thank colleagues at the ENBR workshop for their comments and suggestions, as well as C. Radaelli for making available some published and unpublished works. Mistakes, of course, are only mine...

³ The so called "Oecd methodology" first proposed by *Industry Canada* and subsequently by Colecchia (1999) with reference to the development of e-commerce indicators, inspired by the tripartite product life-cycle pattern well known in industrial economics.

of looking at RIA, and that other, complementary or partly superposed perspectives are possible and have been portrayed by different authors.⁴

Though very loose, this framework is helpful for identifying and positioning some still general but more homogeneous aspects, i.e. the dimensions that we wish to address by indicators. Along these lines - and taking stock both from previous works and the information produced by DIADEM⁵ - under *Readiness* (or amongst inputs) we can include both the resources available for RIA and the 'possibility' of acting, i.e. the fact that we give a space to RIA within the public administration, creating some specific departments, attributing them some functions/powers and establishing specific procedures and appropriate guidelines. When it comes to RIA *usage*, this can be done applying procedures and methodologies more or less properly under both a formal and a substantial perspective. The output of this process is a certain production of proposals, which again can be few or many, and of good or bad quality. Finally, RIA proposals might *impact* differently on political choices, the economy, society and institutions themselves. This will depend on a number of factors, including the presence of built-in devices to improve the system's quality and efficiency, such as continuous evaluation (Table 1).

⁴ For instance, Jacob *et al.* (2006) distinguish *process*, *content*, and *impact*, as target areas for indicators, while Visaggio (2007), whose conceptualisation was developed jointly with this one and is otherwise very similar, also points at the distinction between implementation and evaluation; with reference to empirical studies of ex post evaluation; instead, the Oecd (2004) identifies the dimensions of *compliance*, *process* and *functions*.

⁵ Though with some innovations which might demand the collection of specific information, such as the introduction of the area of *resources*, and others with respect to the organisation of information, terminology and the boundaries between each phase, not uniform with respect to other authors.

Table 1 – A taxonomy of RIA phases and related dimensions for analytical purposes

Phases	Steps & alternative taxonomies	Domains /dimensions within each phase (to be targeted by indicators)
Readiness	→ <i>Input</i>	<input type="checkbox"/> Resources (Financial, Human) <input type="checkbox"/> Legal Framework (degree of RIA compulsoriness in regulatory action, power of RIA Institutions, National Guidelines vs. International standards)
	→ <i>Process</i>	<input type="checkbox"/> Compliance of individual RIAs to National/Intl Guidelines & ways of treating Information flows <input type="checkbox"/> RIA general properties (timeliness, etc.) and extensiveness of analysis
Usage	→ <i>Output</i>	<input type="checkbox"/> RIA results vs. forecasts (ex post <i>evaluation</i>) <input type="checkbox"/> RIA (internal/external) cultural Impact (ex post <i>evaluation</i>) <input type="checkbox"/> RIA (internal) impact on choices (ex post <i>evaluation</i>) <input type="checkbox"/> RIA (external) economic Impact (ex post <i>evaluation</i>)
	→ <i>Outcome</i>	

As we shall see in the following, these aspects are not exhaustive, as others bridging them might ask for consideration, or because there could be other dimensions which would be identified as relevant while some of those mentioned above require further specification or result less important conceptually or after testing, or for other reasons, which might render borders between phases quite blurred, and the interpretation of (at least some) indicators not straightforward.

2. Issues and approach: composites and their limits

Having set some key dimensions for analysis, the next step consists in selecting and manipulating the information required to build appropriate indicators for targeting each of these 'conceptual variables'. In practice, this implies first of all checking what information is available or could be gathered in a cost effective way.

The focus here is on the DIADEM database, still in progress, but the information available, though overabundant for certain items, is also fragmented and not immediately suitable for the purpose, due to its qualitative nature, or y/n type as for the case of tests.

Composite indicators are a possible way of addressing this problem, but a serious hindrance is represented by issues of aggregation, as remarked also by Jacob et al

(2006). Indeed, passing from individual (often qualitative dichotomous) indicators to composites implies building a system of weights. This has an intrinsically subjective nature, which demands data treatment and/or other forms of consensus to be addressed and circumscribed, at least partly.

At present, while DIADEM would in any case not satisfy all information requirements, there are not yet enough data readily available, nor any previous form of consensus building could be performed, so the issue of aggregation cannot be dealt with on practical grounds in this paper, but for a few examples and some referencing to appropriate methodological solutions, leaving applications to future works. For this and other reasons, the system proposed is to be regarded as highly tentative with respect to interpretation. Indeed:

- a) Quantitative techniques based on data that are not yet available are a basic tool also for the selection of elementary indicators and their grouping;⁶
- b) Some issues might lose relevance over time (say, for instance, formal compliance to guidelines) while others would gain ground (say, measures of outcome as the number of RIA becomes larger), so that the system is also intrinsically evolutionary;
- c) The interpretation can change according to the perspective of analysis, considering that some indicators address different aspects of the RIA machine, depending to the way we look at them (e.g., see below, diffusion);
- d) Last but not least, what according to some indicators might appear as a bad (or good) result, could not be such when we take into account other aspects: for instance, a scarce compliance with respect to certain parameters might be due to the fact that in a given country most RIAs do not address issues which, indeed, do not need being addressed to work; besides, relationships are often not stable over time nor the same for all countries.

⁶ An overview of issues and methodologies related to the selection of information, and the construction and testing of composite indicators can be found in the joint JRC-OECD *Handbook on composites* (Nardo *et. al.*, 2005b), while a more technical guide can be found in (Nardo *et al.*, 2005a). An information server dedicated to composites is hosted by the EC JRC-IPSC, at the URL: <http://farmweb.jrc.ec.europa.eu/ci/>

In view of the above, and in order to allow a targeted approach to the evaluation of RIA features, the system of indicators is conceived as open to additions, changes and, especially, to the recombination of its components along different lines. This is achieved by normalising data by setting a unique scale (usually from 0 to 1) for indicators at different levels of aggregation, irrespective of the weights attributed to each component, allowing for their use in isolation or in combination with others, and by applying a common metrics based on percentage results vs. total and/or vs. best performer.⁷

3. A frame of composites along the readiness-usage-impact taxonomy

4.1 Indicators of Readiness: resources and legal framework

At the root of RIA functioning there is its financing and, subsequently, the endowment of human resources. In a strict sense this is an aspect of 'quantity' rather than 'quality'. However, the two issues are strictly intertwined and usually go together, and quantity also can be a matter of comparison.

These aspects can be assessed by means of two sets of indicators, addressing respectively funding and human resources attributed to RIA in quantitative (relative to some general parameters which would allow comparison and relative to tasks) and qualitative terms. These dimensions can also be merged to get thematic indicators and a composite *resource endowment index*, as detailed in Table 2 hereunder.

⁷ This latter specification, when looking for a benchmarking-type result, presents two advantages with respect to the distance formula generally used in benchmarking exercises [i.e. $(\text{Max}-\text{min})/\text{Max}$, where $\text{Max}=1$ and $\text{min}=0$] which, in practice, scales results on worst performer : a) allows for a better grading of results and progress; b) is in line with percentage (of individual RIAs) vs. total, which is the only way to take numbers out of y/n tests.

Table 2 – Indicators on the endowment of resources

A) <i>Financial Effort Index</i>	FEI = α_1 Financial res. Index + α_2 Consistency Index [where $\alpha_1+\alpha_2=1$]
a ₁) <i>Financial resources index</i>	RIA expenditure vs. public Budget (or GDP); (% of highest ranking)
a ₂) <i>Consistency vs. objectives index</i>	RIA exp. vs. turnover of regulated sectors (% of highest ranking)
B) <i>Human Resources Index</i>	HRI = (HR Quantity index)*(HR Quality index)
b ₁) <i>HR Quantity index</i>	HR in regulatory authorities vs. employment overall, or in businesses subject to control; (% of highest ranking)
b ₂) <i>HR Quality index</i>	<p><i>Adequate technical skills & balancing</i> = sum of weights by staff expertise composition index (% of totals). An example with purely conventional distinctions among staff categories could be:</p> <ul style="list-style-type: none"> ✓ Administrative staff < X% = β_1 (else =0) ✓ Technical staff from regulated industries > Y₁% = β_2 (else =0) ✓ Technical staff - economists > Y₂% = β_3 (else =0) ✓ Technical staff - engineers > Y₃% = β_4 (else =0) ✓ Technical staff - juridical > Y₄% = β_5 (else =0)
	<i>[Where: $\Sigma\beta=1$; $\Sigma(Y, X) < 1$]</i>
Resource Endowments Index	REI = α (FEI)+ β (HRI) [where $(\alpha + \beta) = 1$]

These indices are to be considered only a first approximation for testing and refinement, for instance with respect to variables used as denominators of the ratios.⁸ Besides, other aspects might be included under the above headings. In particular, as stressed by Jacobs (2006), adequate training of personnel is also a key determinant of RIA (and of Human Resources) quality, so that *Indicators of training* might be computed (complementary, or alternative to the HR quality index above), both with respect to financial effort (amount of resources devoted to training/retraining) and to RIA personnel (percentage of staff which underwent training/retraining).

Unfortunately, at present the collection of data for computing these indicators is performed only in some countries, such as the UK, and was not included into the

framework of DIADEM. As we shall see in the following, it is also worth noting that the *Financial Resources Index* alone does provide a synthetic measure of input (though within a purely monetary perspective), and that with some caution we can also compute *Efficiency Indices*, as outputs (results from action)/inputs (or effort) ratios.

Besides resources, in the previous section another major area was identified as contributing to RIA *readiness* under the heading of “Legal Framework”. This, primarily, consists of the features and powers of RIA institutions, which arguably constitute another basic aspect conditioning the working of RIA systems.

In table 3 hereunder we portray a (set of) composite *Indicator(s) of Institutional development*, where the areas of implementation and evaluation are considered separately and, within each of them, a formal and an operational dimension are distinguished.

Table 3 – Indicators on features and powers of Institutions

COMPTS. PHASES	Formal	Operational (tasks & assignments)	Tot.
Implement.	<u>RIA diffusion across govmt. levels</u> ✓ <i>Central gov.</i> (1.0) ✓ <i>Sub-central gov.</i> (1.0) ✓ <i>Independent agency</i> (1.0)	<u>Powers of RIA body</u> ✓ <i>Veto</i> (1.0) ✓ <i>Advising</i> (0.5) ✓ <i>Consulted</i> (0.5)	5.0
Evaluation	<u>RIA completeness</u> ✓ <i>Independent</i> (1.0) ✓ <i>Internal</i> (1.0) ✓ <i>No evaluation structure</i> (0.0)	<u>Extensiveness of evaluation</u> ✓ <i>Compliance to guidelines</i> (1.0) ✓ <i>Quality of RIA analyses (costs/ benefits /assumptions...)</i> (1.5) ✓ <i>Wideness of RIA analyses (social/ economic/environmental...)</i> (0.5)	5.0
<i>Total</i>	5 pts	5 pts	10. 0

The choice of phases and components presented in Table 3 is, of course, just one of the possibilities, as well as the elementary indicators used can be questioned. Besides, for sake of simplicity we let the value of the composite *Indicator of overall Development of Institutions* (IDI) vary from 0 to 10 attributing identical weights (0 to 5) to the two phases of implementation and evaluation, as well as to the formal and operational components: different weightings can obviously be attributed to each component and underlying indicators, and the field of variation of indices is to be rescaled on a 0 to 1

⁸ For example there might be some economies of scale in RIA, suggesting for a correction with respect to country dimensions, or definitions of ‘public administration’ might not be easily comparable, and so on.

when proceeding to further aggregations. Finally, it is worth noting that sub-indices could also be assembled along different lines: for instance, we could compute a side indicator depicting *RIA institutional strength*, by putting together the two indicators for the operational component and that for RIA completeness.

Legal framework conceptually includes also the *compliance of national guidelines with respect to international standards*. However, as the same elementary indicators (tests) can be used (performed) and composites built for tracking the compliance of RIA practice to guidelines and to analyse individual RIA features, these aspects are treated together in the next Para on indicators of usage. Finally, it is worth noting that, by applying the same weighted average methodology, a composite *Legal framework Index* can be computed by merging the dimensions of institutions with compliance to international guidelines (see below), as well as an overall *Index of Readiness*, by putting together resources and legal framework.

4.2 Indicators of usage (process and output): compliance to guidelines, properties and diffusion of RIAs

When looking at the usage of RIA, an issue which has already been explored is that of ‘how’ the process is performed, i.e. of the (formal) compliance of RIAs to guidelines. This is an area for which is information – although of a y/n type – is going to be abundant, thanks to DIADEM. Under this heading we can consider the compliance of RIA practice to national (and, indirectly, international) guidelines, as well as individual RIA features and, as anticipated above, the correspondence of national to international guidelines can be analysed by means of the same indicators, though as part of the legal framework dimension.

Irrespective of which of these aspects we wish to examine, information on specific items can be grouped around three main areas: a) the process of problem identification, preliminary to RIA itself; b) the analytical options included into RIA; and c) the procedures of consultation undertaken and related information flows from and to the public.⁹ These areas and underlying items are described in Table 4.

⁹ It is worth stressing once again that, being the categories proposed subjective, other ways of considering or subdividing compliance might be preferred conceptually and after testing for robustness, excluding some elementary indicators or dimensions (consultation is a candidate), and changing the borders between components.

In the case of compliance too, composite indicators proposed are modelled in such a way that their value, at any level of aggregation, can vary from 0 to 1: some adaptations can be made, recomposing differently thematic indices and/or introducing other elementary indicators for evaluating IA practices. For instance, with respect to consultation, it could be worth considering whether it is conducted prior (+) or after (-) detailed proposals, or compute a *wideness of consultation index*, which would consider categories (stakeholders, experts, etc.) and phases of the decision making process involved.

Table 4 – Indicators of compliance

<u><i>Problem identification and Impact Assessment preliminary framework index</i></u>	(A) = $\Sigma(\alpha\alpha)$
(1) <i>Identification of magnitude</i>	(α_1) coeff.: (α_1)
(2) <i>Identification of causes</i>	(α_2)
(3) <i>Identification of baseline situation and trends</i>	(α_3)
(4) <i>Multi-tiered approach to IA (No=0; yes=0.5 or 1 if explicit criteria also stated)</i>	(α_4)
(5) <i>Description of incentives of interests affected</i>	(α_{51})
(6) <i>State explicit reasons for IA (welfare maximisation / Cost minimisation)</i>	(α_{52})
<u><i>Policy options index</i></u>	(B) = $\rho B_1 + (1-\rho)B_2$
(B ₁) <i>IA Analytical features index</i>	$B_1 = \Sigma(\beta_{1x}b)$
(7) <i>Articulate policy objectives as measurable outcomes</i>	(β_{11})
(8) <i>Require alternative approaches to be considered</i>	(β_{12})
(9) <i>Consider zero option</i>	(β_{13})
(10) <i>Consider market solution</i>	(β_{14})
(11) <i>Risk analysis</i>	(β_{15})
(12) <i>Identification of parties affected by changes</i>	(1=all; 0.5= partial; 0 = no; β_{16})
(13) <i>Identification of appropriate level of government (subsidiarity)</i>	(β_{17})
(B ₂) <i>Extension of Policy options analysis index</i>	$B_2 = \Sigma(\beta_{2x}b)$
(14) <i>Performance in terms of enforcement & compliance</i>	(β_{21})
(15) <i>Administrative burden</i>	(β_{22})
(16) <i>Impacts on competition</i>	(β_{23})
(17) <i>Impacts on SMEs</i>	(β_{24})
(18) <i>Other impacts (social, environmental, ...)</i>	(β_{2i})
<u><i>Stakeholders consultation and information Index</i></u>	(C) = $\Sigma(\gamma c)$
(19) <i>Consultation (1=mandatory; 0.5=suggested; 0 = no)</i>	(γ_1)
(20) <i>Scope of consultation</i>	(γ_2)
(21) <i>Prescription on timing</i>	(γ_3)
(22) <i>Prescriptions on method</i>	(γ_4)
(23) <i>Accessibility (free access by any member of the public)</i>	(γ_5)
(24) <i>Ways of considering & responding to consultation input</i>	(γ_6)
(25) <i>Transparency (Mandatory report on results)</i>	(γ_7)

Where: $\Sigma\alpha, \Sigma\beta, \Sigma\gamma [0, 1]$

Procedural Compliance Index (PCI) = $\varepsilon(A) + \phi(B) + \sigma(C)$, where $(\varepsilon + \phi + \sigma) = 1$

The indicators of compliance proposed address the process of RIA implementation from a formal perspective, but of course have to do with its capability to interpret real-world dynamics. Another step in this direction is represented by indicators addressing the way RIAs are undertaken and their *outputs* in terms of a set of desirable *properties*. These include *timeliness* of the analysis, *measurability* of outcomes, *proportionality* of effort,¹⁰ *consistency* of key economic assumptions and forecasts with reality (ex ante and ex post), *transparency* of the process and *accessibility* to the general public. A list of possible indicators related to these properties is reported in Table 5 hereunder, drawing from existing literature, using the opportunities offered by DIADEM or just building them *ex nihilo*.

Table 5 – Indicators addressing RIA quality related properties

<u>Timeliness:</u>	(1) RIAs performed before policy choice per country / body [%of, rescaled as (2)]	
	(2) Months from initial proposal	(rescaled on best performer)
<u>Measurability:</u>	(3) Costs and/or benefits computed and compared	(percentage of individual IA)
<u>Proportionality:</u>	(3) Net benefits of RIA superior to costs (RIA costs vs. estimated benefits of proposal)	
	<u>Consistency/accuracy:</u>	(4) Discount rate in line with market rates (1 - average percentage distance)
	(5) Forecasted vs. real outcomes	(only ex post, 1 - average percentage distance)
	(6) RIA considering trade-off between objectives	(percentage of)
<u>Accessibility:</u>	(6) RIA published or available on request	(percentage of)
<u>Transparency</u>	(7) RIA for which an executive summary is published	(percentage of)
<i>Quality properties Index (QPI) = weighted sum of individual indicators</i>		

Indicators in Table 5, irrespective of their being derived from simple tests or based on quantitative information, in most cases require several practical problems being addressed before usage. For instance, Timeliness indicator (2) ought to be corrected for some measure of depth of analysis performed, else be dropped using only indicator (1); further, Consistency indicator (5) depends crucially on the availability of monetary forecasts as in indicator (3) for computation (a zero value, i.e. 100% distance, might be attributed to those RIA which do not provide them), and so on.

¹⁰ In this case on substantial, not formal grounds as for the case of compliance indicators in Table 3.

Passing from RIAs general properties to their features in terms of impacts considered, we can follow the standard distinction between economic, social and environmental impacts and, identifying a series of items within each of them, build synthetic indicators for comparing RIA systems, in terms of the variables considered in each type of impact assessment, the frequency with which certain impacts are considered, and overall.

Table 6 - Indicators on RIA impact analytical dimensions and accuracy of estimates

Economic (a₁) Competitiveness + (a₂)SMEs + (a₃)Investment + (a₄)GDP + (a₅)Trade + (a₆)Inflation +...

Social (b₁) Health + (b₂) safety + (b₃) Employment + (b₄) social inclusion + (b₅) gender + (b₇) ...

Environmental (c₁) renewable / non renewable resources+ (c₂) Biodiversity + (c₃) air & water quality +...

Overall (OII) = $\delta_1A + \delta_2B + \delta_3C$ Where $\Sigma a = \Sigma b = \Sigma c = \Sigma \delta = 1$

All indicators are built in percentage of total RIAs; for comparative purposes they can be further rescaled with respect to best performing country/body)

Indicators in table 6 can be used also for ex-post evaluating whether impacts were correctly estimated in each domain and for each variable considered, as indices of *consistency/accuracy* (distance of estimates from real world dynamics), complementary to those in table 5 above. However, it has to be reminded that this type of assessment (as in Table 5) faces the issue of real world variability (aspects which could not be forecasted when estimates were produced), that we shall not deal with here.¹¹

When used for assessing overall RIA quality, we have to consider that indicators work by attributing a higher value to RIAs including a larger number of variables and different types of impact. This implies that they risk to vehicle a very poor information content, as there is not a prescription common to all RIAs: for instance, should a RIA on a proposal of regulation for bread-making consider environmental issues, and to what extent? Hence, a less ambitious aim could be fixed, using the variables included into each indicator as signposts, only to depict average degrees of complexity/completeness of individual RIAs for each type of impact and for the whole lot, and the overall average degree of complexity of RIAs in a given system, which, in turn, can represent a weighting reference for assessing RIAs under other perspectives, such as in terms of *efficiency* (see below).

¹¹ A side indicator for assessment in this case might refer to whether an estimate was explicitly produced within RIAs for risk factors which would impact on results (e.g. 'doubling of oil prices', etc.)

Finally, *usage* as such means that RIA is an everyday practice. Hence, along with the above aspects (and perhaps on top of them) we should also consider RIA *diffusion* (Table 7).

Table 7 – Indicators addressing RIA diffusion

(1) <i>Rough</i> (general)	Proposals undergoing RIA (percentage of/absolute number, rescaled on best performer)	
(2) <i>Horizontal</i> :	Spread of RIA across different levels of government	(see above, Institutions)
(3) <i>Targeting</i>	.. with respect to highest ranking affairs (monetary/political impacts)	(percentage)
Compound	Vertical diffusion corrected for (2), (3) &/or others	[(1)/(2, 3), normalised]

In this line of thought, we can track the spread of RIA in *general*,¹² and/or weighted (*compound index*) by taking into account also its diffusion across different levels of government (*horizontal*), or by using other variables, such as compliance, in depth/extensiveness of analysis, or relevance (*targeting*, as expressed by monetary or political interests involved).¹³

It has to be observed that diffusion can also be interpreted as belonging to the dimension of *impact*, when we consider it as a result of the break-through of the culture of better regulation, and that RIAs themselves can contribute to it.

Finally, as for readiness, we could compute an *Index of overall usage*, by combining indicators in tables 4-7 above.

4.3 Indicators of Impact / Outcome

Assessing the overall impact of RIAs on quantitative terms is the less explored and most difficult issue. However, drawing from literature at large, we can identify at least few, often intertwined aspects: the diffusion of RIA *culture* mimicked by implementation, detailed above, usually leads to gains in RIA *efficiency* and in turn to a higher *effectiveness* (Table 8).

¹² Please note that computing the index as ‘percentage of’ requires a previous agreement on the typology of normative acts to be considered for comparison. Alternatively, a rough version can be computed, as ‘absolute number of RIA rescaled on best performer’, in view of the fact that normative production might differ enormously between elsewhere similar countries, and at the same time be similar between large and small countries.

¹³ The Oecd (1999) remarks that – with respect to the change of policy focus by the OMB in the United States [but the same issue is reported for the UK by BRE (2006)] – when applying such indicators to evaluation (once the system has grown complex enough to render it meaningful) a reduction in their number compounded by a better focus (with respect to the relevance of RIAs) resulted in an overall improvement. This issue, which undoubtedly represents a caveat for the case of implementation as well, could be addressed by an appropriate system of weights.

Table 8 – Indicators addressing RIA Impacts /outcomes

<u>Diffusion</u>	(see above);	
<u>Efficiency:</u>	(1) <u>Rough:</u> Unit cost of IAs, including indirect costs	(UCI=€/IA)
	(2) <u>Corrected:</u> UCI weighted by indicators of intensity, compliance or relevance	(UCI/PCI)
<u>Effectiveness:</u>	(3) <u>Normative:</u> Regulation subject to RIA subsequently amended	(percentage)
	(4) <u>Monetary:</u> ex post gains (cost reduction/benefit increase) due to RIA (rescaled on best perf.)	
	(a): with respect to original proposals	
	(b) with respect to baseline situation	
Overall Impact	(OII) = normalised and weighted sum of (2), (3) and (4a), eventually including diffusion	

As for diffusion, the rough Indicator of *efficiency* needs being corrected to take into account the complexity of RIAs undertaken. This can be done using indicators for compliance (composite PCI, or some component indicators, such as those reflecting policy options), for extensiveness of analysis, for relevance, or a mix of them: testing for robustness and variability could be of great help for an appropriate choice.

With respect to *effectiveness*, instead, some normative and monetary indices were defined and computed in empirical literature and by RIA authorities. The proposal here is to extend monetary indices to baseline situations, and to study the relationship between the two, which would provide a measure for *RIA average impact* (representing an indicator of its focus, complexity, etc.).

An overall impact indicator can also be computed with the usual methodology, as well as other indicators for tracking the *Cultural impact*, with respect to *awareness* (for instance, by monitoring media coverage, or by ad hoc surveys on stakeholders and policy-makers), *participation* (drawing on indices for consultation, and/or looking at the development of the RIA approach by stakeholders themselves).

All in all, we have to warn that impact (or outcome) indicators, even when properly designed, can be often tricky when interpreted. Jacobs (2006) provides a clear example of this kind of issues, with respect to the fact that often RIA systems gain in efficiency and effectiveness over time, so that a U shaped curve might be expected for the results of implementation. Systems which are in place since long thus have a comparative advantage on younger ones, and the results of the latter might be not only worse, but induce to think that RIA is, after all, counterproductive. This kind of issue, which can

appear also for other families of indicators, could be tackled by considering explicitly the effect of time.¹⁴

4. From simple to complex and back: key indicators for monetary evaluation

On purely abstract grounds, following the procedures outlined above (sum of coefficients =1 etc.) we could put together composite thematic indicators and compute indicators addressing different aspects or the whole RIA system, such as $RIA = a(Readiness) + b(Usage) + c(Impact)$, in the most comprehensive form. On the other side, we might decide to monitor only some aspects / components, which are deemed to be of particular relevance.

In this line of thought, we could focus on the monetary dimension of RIA, identifying a sort of *Quantitative backbone* made up of a few key, headline indicators. These, based on measurable aspects of RIA systems, would target each one of the phases of the readiness-usage-impact taxonomy and suffer only in part of the limitations and shortcomings which have been pointed out above with respect to composites.

Within this framework, the *Financial Resources Index* could be used for monitoring readiness, the *Compound diffusion Index* (with weights based on monetary relevance) as a synthetic measure of usage, and the *Monetary Effectiveness Index* (with respect to original proposals) for tracking impact.¹⁵ Considering RIA as any production process, we have resources fed into the RIA machine, which produces some outputs that, sold on the market, are again transformed into money. This view allows also highlighting the critical points in these transformations (i.e. how effectively inputs become outputs and outputs money?), obtaining side indicators for *efficiency* and *average value* (Table 9).

¹⁴ This can be done: a) at the moment of computing the indicator, by treating a progressively diminishing part of costs as a long run investment (i.e., imputing only a quota as amortisation), and b) in comparisons, by applying a correction factor, such as dividing results by the number of years (in absolute, log or other forms) since RIA implementation.

¹⁵ In all cases, indicators ought not to be rescaled on best performer.

Table 9 – The quantitative backbone indicators addressing RIA monetary dimension

Stages	Readiness	→	Usage	→	Impact
&Concepts	Effort		Diffusion		Effectiveness
<u>Key Indicators</u>	<i>Financial Resources</i>		<i>Compound Diffusion</i> (3)		<i>Monetary Effectiveness</i> (a)
<u>Critical pts</u>		<i>Efficiency</i>		<i>Average value</i>	

We can then follow different roads, based on data availability and other considerations. If we do not have information on the whole process, we might consider that each indicator should roughly approximate the other two, and limit the field of observation. Second, we might be able to monitor all stages, so that we can see how efficiently money getting into the process is transformed into money coming out, and analyse leakages by means of the side *critical point* indicators.

This approach, it has to be acknowledged, can be criticised under many respects. Indeed, many of the warnings outlined in the above sections apply to this latter tool as well. Besides, RIA is not only an issue of money in-money out; not all impacts can easily transformed into monetary equivalents (what is the value of participation?) and/or because in many cases results depend crucially on shadow values for transformation. Summing up, this frame of headline indicators does not have to be overemphasised on grounds of practical relevance and its usage requires caution; at the same time, once amended and tested, it can constitute a complementary instrument for monitoring RIAs from a quantitative perspective.

5. Concluding remarks

This paper aims at offering a contribution to the debate on indicators for comparing RIA systems from a practitioner's perspective. A loose conceptualisation of the different (chrono) logical phases of RIA was sketched, to serve as a basis for designing a set of (mostly composite) indicators encompassing all relevant thematic domains (or conceptual variables). These indicators were outlined and discussed, together with related computational solutions, and a derived, smaller set of headline indicators addressing RIA specifically in a monetary perspective was also proposed.

The paper, especially with respect to the more comprehensive frame of composites, does not yet reach a fully operational stage, due to a number of issues which were addressed only partly and/or from a purely abstract perspective, and both computational solutions and indicators require further refinement.

To this end, contributions from experts can sharpen definitions of target phenomena, and would be of great help for addressing issues of weights, at least tentatively; an equally relevant contribution, however, would come from empirical testing, which was not possible at present, due to limitations in data availability. Indeed, the paper intentionally referred extensively to the items in the DIADEM database which is still in progress, taking on board nearly everything, as for most indicators in empirical literature; a certain amount of brand-new items were also added to the lot based on, say, inspiration of the moment, so that some information gaps will also need being addressed, would related indicators be deemed relevant.

Correlation analysis, tests of robustness and sensitivity, factor analysis and other techniques might lead to reducing the number of elementary indicators, to a clearer view of phenomena to look at when comparing RIA systems and on key relationships among them (resulting also in the selection of variables and the identification of proxies), as well as to the check and tuning of weighting systems defined otherwise (e.g. by expert-groups). But this is for the future...

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