

Nicolaides, Phedon; Preziosi, Nadir

Article — Published Version

Discretion and accountability: An economic analysis of the ESMA judgment and the Meroni doctrine

Intereconomics

Suggested Citation: Nicolaides, Phedon; Preziosi, Nadir (2014) : Discretion and accountability: An economic analysis of the ESMA judgment and the Meroni doctrine, Intereconomics, ISSN 1613-964X, Springer, Heidelberg, Vol. 49, Iss. 5, pp. 279-287, <https://doi.org/10.1007/s10272-014-0510-2>

This Version is available at:

<https://hdl.handle.net/10419/155743>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Phedon Nicolaides and Nadir Preziosi

Discretion and Accountability: An Economic Analysis of the ESMA Judgment and the Meroni Doctrine

This paper assesses the effectiveness of the Meroni doctrine in the light of the recent judgment in the ESMA case. The first part explains in detail the problem of delegation of powers in the EU from the perspective of the principal-agent theory and complements it with the analysis of the trade-off between different levels of independence and accountability of agencies. A simple economic model is developed to illustrate the relationship between the independence and accountability of an agency. It shows that it is the accountability mechanism that induces the agent to act, rather than the extent of his independence. The paper also explains the intertemporal interactions between the principal and the agent on the basis of the incentives in place for the different players.

Numerous agencies have been set up by the European Union for the purpose of implementing a wide variety of policies. A recent judgment by the Court of Justice in a case brought by the UK against the European Parliament and the Council of the EU demonstrates that there is no consensus on the powers that should be delegated to these agencies and the extent of discretion they should have.

Using economic analysis, the purpose of this paper is to consider the institutional structure of such agencies and to assess the so-called Meroni doctrine that stipulates that agencies must have limited discretion.

The paper argues that agencies entrusted with enforcement tasks should have extensive discretion which should, however, be counterbalanced with equally extensive accountability mechanisms. Seen from the perspective of effective enforcement, the Meroni doctrine appears to be outdated or at least an inappropriate instrument for controlling that kind of agencies.

Phedon Nicolaides, College of Europe, Bruges, Belgium.

Nadir Preziosi, College of Europe, Bruges, Belgium.

The ESMA judgment in a nutshell

The UK sought annulment of Article 28 of Regulation 236/2012 that had conferred powers to the European Securities and Markets Authority (ESMA) to control “short selling” (selling of securities not actually owned by the seller).

The UK claimed in case C270/12 that ESMA had significant discretionary powers that were contrary to EU law and especially the Meroni doctrine. On 22 January 2014, the Court of Justice of the EU rendered its judgment. The Court differentiated between the delegation of clearly executive powers and the granting of discretionary power to an agency. Having discretionary powers would allow it to exercise actual economic policy. The latter situation is not compatible with the EU Treaty as it results in transfer of responsibility.

The Court ruled that the powers of ESMA were sufficiently delineated and therefore ESMA did not have a large margin of discretion to conduct autonomous policy. The relevant ESMA Regulation was, therefore, compliant with the Meroni doctrine.

According to the Court, ESMA's functioning was circumscribed and, therefore, it could not act autonomously. Moreover, the Court ruled that having decision-making powers was not equivalent to having discretion, as long as those powers were precisely delineated.

The nature of accountability

There is a voluminous literature on accountability, mostly in the fields of political science, administrative science and law.¹ With a few notable exceptions, economics has not paid much attention to this issue. There is no universal or established definition of accountability. But at least two aspects of it are widely recognised and analysed in the broader literature.

The first aspect is that the agent has to report to a higher authority or principal. Through this reporting, the agent accounts for his decisions and actions. The second aspect is that the higher authority or principal can reward or censure the agent. The agent bears the consequences of acting improperly or insufficiently.

Other aspects of accountability concern the extent of control exercised by the principal over the agent, such as prior authorisation of decisions before they are implemented, extent of reporting by the agent and the severity of sanctions that can be applied by the principal.

It is also noted in the literature that certain forms of accountability may impinge on the degree of independence of the agent, which also affects the amount and quality of the effort exerted by the agent. By definition a principal assigns tasks to an agent because the principal cannot or does not want to carry them out himself. The agent, therefore, must be able to act without receiving further specific instructions from the principal to do so each time he acts.

It is important to appreciate that an agent without some independence cannot be accountable in the sense of being responsible for his actions. If all of the decisions and actions of the agent are controlled by the principal, then the agent can only be considered as an extension of the principal, not as someone who can act autonomously or separately. An accountable agent must enjoy a certain degree of autonomy or independence.²

Independence is even more essential when agents need to use their own knowledge, experience, initiative and

judgment to generate outcomes which cannot be defined *ex ante* and exhaustively by the principal. In these circumstances, granting the agent too little independence would defeat the purpose of assigning or delegating tasks to an agent. Attempting to control closely the actions of the agent (i.e. reducing the independence of the agent) would compromise the achievement of the end results. Therefore, accountability is a means for ensuring that independence is exercised properly, effectively or fruitfully, whenever such independence is necessary for achieving results which are *ex ante* unknown. It would appear that the more independent the agent, the more accountable he should be. But the unavoidable implication of conferring independence to the agent to act as he considers appropriate is that the principal must accept the consequences of the decisions and actions of the agent.

While an accountable agent must be independent to perform whatever he is responsible for, the converse is not necessarily true. An independent agent is not necessarily accountable. Yet, a principal must make an independent agent accountable, otherwise he may do whatever he wants to do irrespective of the wishes of the principal. So it is in the interests of the principal that the agent is independent and at the same time accountable too.

But there is a problem here. Certain forms of accountability which are too intrusive or are applied *ex ante* (e.g. requirement for prior and detailed notification and authorisation of intended action) may curtail the independence of the agent. Whether all forms of accountability necessarily reduce the independence of the agent is a contentious issue.³ Some authors argue that they are inversely related, others contend that they are linked but not in a strict inverse relationship. Yet some others think that they are separate concepts.

For sure the two concepts can be defined both as distinct and as interrelated. For the purposes of this paper, we understand independence to be a description of the universe of all possible actions/decisions, and accountability to be a determinant of the choice of specific actions within that universe. In other words, independence delineates boundaries and accountability leads to selection of particular actions within those boundaries. It is possible that certain accountability mechanisms or arrangements may restrict the universe of possible options and therefore end up curtailing the independence of the agent and vice versa. The “art” in the delegation of tasks is to find an

1 See, for example, J. Biela, Y. Papadopoulos: Strategies for Assessing and Measuring Agency Accountability, Paper for the 32nd EGPA Annual Conference 2010, Toulouse 7-10 September 2010; M. Bovens: Analysing and Assessing Accountability: A Conceptual Framework, in: *European Law Journal*, Vol. 13, No. 4, 2007, pp. 447-468; M. Maggetti, K. Ingold, F. Varone: Having Your Cake and Eating It Too: Can Regulatory Agencies Be Both Independent and Accountable?, in: *Swiss Political Science Review*, Vol. 19, No. 1, 2013, pp. 1-25.

2 For the definition of independent of an agency, see M. Scholten: Independent, Hence Unaccountable? The Need for a Broader Debate on Accountability of the Executive, in: *Review of European Administrative Law*, Vol. 1, No. 4, 2011.

3 See M. Scholten: Independence vs. Accountability: Proving the Negative Correlation, in: *Maastricht Journal of European and Comparative Law*, Vol. 21, No. 1, pp. 197-204, and references therein.

arrangement whereby the agent is accountable without his independence being excessively curtailed.

Over time, however, the principal learns from the results of the decisions and actions of the agent. That is, the actions of the agent reveal information about his ability to achieve what the principal wants. This means that the principal-agent relationship is dynamic and evolves over time. Both the principal and the agent will, of course, take the revealed information into account, the principal *ex post* and the agent *ex ante*.

The next section uses a simple model to formalise the relationship between the principal and the agent in order to identify how an accountable agent is likely to behave and what is the best approach for the principal who can determine the boundaries of the agent's independence and the accountability mechanisms to which the agent is subject and can take into account learning effects over time.

A simple model of accountability and independence

In the typical principal-agent formulation, there is a component of the agent's work that is observable and a component that is not.⁴ For most principal-agent relationships the non-observable component is the most important element that affects the outcomes produced by the agent. In the case of ESMA, this does not appear to be very significant because, given its regulatory function, it must make public all the rules it devises and enforces. Moreover, as explained later on, ESMA has to consult its principals before it acts. Hence, there is no major problem in observing ESMA's actions. However, there is still a problem in motivating ESMA to be innovative and devise rules that can prove effective in pre-empting and remedying market malfunctions. Consultation can prevent ESMA from acting, but cannot force it to act and, for sure, it can hardly make it more innovative. Since in designing and enforcing financial regulation pre-emption is important, inaction (i.e. under-regulation) can be as problematic as excessive action (i.e. over-regulation). In addition, and perhaps more importantly, outsiders do not observe the internal costs of ESMA. These are not the accounting costs of ESMA's functions, which are probably well-known to its principals. Rather they are the costs associated with effort, managerial supervision, staff motivation, etc. Certainly, these internal costs exist in all organisations, and also in ESMA, and they do have an impact on ESMA's performance. We consider their impact immediately below.

⁴ There is also a component that is neither observable, nor definable *ex ante*. This component is made up by the internal characteristics of the agent such as ingenuity, intelligence, tenacity, etc. They very much influence the final outcome but cannot be meaningfully measured.

We assume that ESMA is a rational agent that wants to minimise the costs it bears from its operations. This is its objective function. Let us indicate the costs borne by ESMA by its own actions as C . C is a function of x which is a measure of the regulatory effort of ESMA; i.e. $C = f(x)$. Further assume that because some effort is both observable and measureable, it can be fixed in advance so that the agent is forced to exert a certain minimum effort. The function C becomes then $C = f(e' + x)$, where e' is the minimum required effort and x is extra effort. In Figure 1, function C is simplified by assuming that it takes the form $C = \beta(e' + x)$ (a straight line). The horizontal axis starts at e' .

The ideal situation for the principal is when the agent exerts as much effort as necessary to reach the best possible outcome. Since in the case of ESMA the desired outcome is defined only in terms of general policy targets, the principal focuses on the effort exerted by ESMA. In general, the more effort exerted by ESMA the better. As explained later on, the regulation that establishes ESMA and the regulation on short selling impose on it certain obligations to regulate or, in our terms, to act. This can be thought of as one of the accountability mechanisms that apply to ESMA.

Let us assume that the principals of ESMA define the accountability mechanism in a way that reflects the gains to society from ESMA's regulations. We can think of it as corresponding to the social opportunity cost from ESMA inaction. Therefore, if ESMA does not exert additional effort, social costs are high, but as ESMA acts, costs decline. We can now consider how this impacts on ESMA. The accountability mechanism can reasonably be presumed to be designed in such a way so that it also creates costs for ESMA (i.e. inaction is costly for ESMA).

If the opportunity cost of society is given by a function A , then we can surmise that the accountability mechanism is such that a proportion of A , i.e. αA , reflects the costs borne by ESMA. It is assumed that A is convex so that $dA/dx < 0$ and that $d^2A/dx^2 > 0$. That is, as ESMA exerts more effort, the costs of these obligations decline but at a decreasing rate. Obligations imposed on ESMA make it accountable because it is costly for it not to fulfil them. Although inaction is costly, excessive action is costly too because after a point (shown by x'' in Figure 1), function A curves upwards. Since we already assume that the principals do not have a perfect accountability mechanism (at this point $dA/dx = 0$), the costs (which are a proportion of the opportunity cost of society) do not decline to zero. The principals are never sure that ESMA action resolves all market problems or that it is even theoreti-

cally possible for ESMA to resolve all problems (so they always face some opportunity cost). For the principals there are two distinct sources of information: the market and ESMA. The problem is that the information is mixed up.

The objective of ESMA is to find an x such that it minimises the total cost, T , of effort and accountability. That is, it minimises $T(C, A) = C(x) + A(x)$. The optimum x for ESMA is at x^* , where $dC/dx = -dA/dx$. This is shown in Figure 1 where x^* is at the point where total cost T is at its lowest level. It is important to note is that if functions C and A have linear and convex shapes, respectively, then there will always exist a minimum. ESMA will not want to move beyond x^* , nor will it want to stay below x^* .

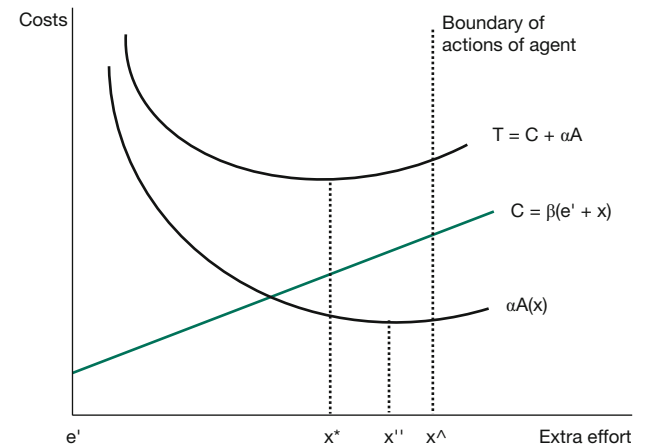
Incidentally, it is worth noting at that point that a regulator in the situation described here would experience economies of scale because for certain values of x , function T is downward-sloping. More formally, if we raise respectively the cost of ESMA's own actions and the opportunity cost for the society by a constant term γ , the resulting total cost function satisfies the inequality $T(\gamma C, \gamma A) < \gamma C(x) + \gamma A(x)$.

These economies of scale also suggest that a single regulatory authority is a more efficient arrangement, *ceteris paribus*, than a system with multiple authorities (of course, there is also the problem that a system with multiple authorities and overlapping jurisdictions would create confusion and enforcement conflicts). On the other hand, the existence of multiple authorities allows their principals to compare their performance. In our model we do not formally analyse interaction between multiple regulators. However, we will return to this issue in the section where we assess the ESMA judgment.

To summarise so far, our simple model shows that it is the accountability mechanism that induces the agent to act, not the extent of his independence. Limiting independence limits the options of the agent but does not incentivise the agent either to exert more effort or to choose any particular option. If the above simple reasoning holds, then ESMA has a strong incentive to be active in devising and enforcing regulations. Accountability mechanisms that penalise inaction do indeed induce ESMA to regulate. In practice, the essential question is whether the regulations that are certain to come out of ESMA are such that they can achieve the objective of preventing and remedying market failure.

In the next section we explore in more detail the interaction between the principal and agent over time, as they may take into account learning effects.

Figure 1
Effort, costs and accountability of the agent



Source: Own elaboration.

Intertemporal interaction

As shown in the previous section, there is a natural tendency for an accountable agent to act. Therefore, the principal should worry more about binding constraints on the independence of the agent. Figure 1 can help us understand the impact of such binding constraints.

For whatever accountability mechanism that is used, the agent must have sufficient independence to exercise additional effort. If the constraints on the independence of the agent prevent him from reaching x^* then they are binding. If they become binding only for a value of x such that $x > x^*$, then they are not binding because the agent would never voluntarily exert effort larger than x^* . This means that the natural tendency of the agent to be active, but not excessively active, implies that the principal should be concerned about the negative impact of too little independence rather than too much independence (for whatever accountability mechanisms that are imposed).

Figure 1 also shows a boundary at x^{\wedge} imposed by the principal on the actions of the agent. The boundary is never reached by the agent because $x^* < x^{\wedge}$. In this model, boundaries are not effective in inducing the agent to get closer to x' (which is the value such that $d(\alpha A)/dx = 0$ and it is the optimum of the principal because it minimises society's costs from market instability).

If the boundary that is shown in Figure 1 is an upper boundary, one may think that the solution is to impose a lower boundary to force the agent to move to the right. But if accountability mechanisms apply only within the limits of the boundaries of the agent (i.e. the extent of the agent's independence) and if they have the shape that is

postulated here, it is likely that x^* and x'' will get closer to each other, but will not coincide. After all, Figure 1 also has a lower boundary. It is the vertical axis at e' .

Figure 1 can help us gain some insight into the nature of the trade-off between the independence of the agent and his accountability. By compressing the lower and upper boundaries and by limiting the distance between them, the optimum of the agent, x^* , gets closer to the optimum of the principal, x'' . But this assumes that the principal has a pretty good idea of the value of optimum action by the agent. If he does not, then he risks limiting the options of the agent to a range of x that may be far from the real x'' . If the principal does not have the prerequisite prior knowledge, the boundaries must be wider apart, which also increases the distance between x^* and x'' . *Ex ante* ignorance entails that many possible values of x are admissible.

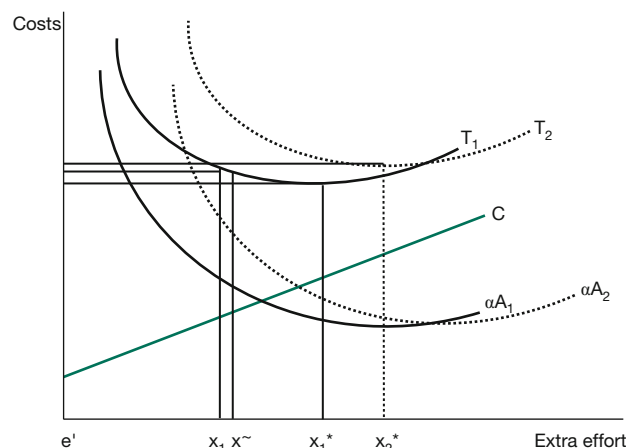
Now, let's inject a bit of complexity. The section on the nature of accountability was concluded with the suggestion that both the principal and the agent learn over time. It is therefore reasonable to assume that the principal would expect the agent to internalise these learning effects. An accountable agent must be an agent who is capable of learning and adjusting, but a non-adjusting agent must also be accountable. Indeed accountability can be thought to imply that the agent has to justify why he chooses to ignore important information that is relevant to the attainment of the objective set by the principal.

But this creates a problem for the agent in the following sense. Assume that the principal and the agent interact in two periods, 1 and 2. Figure 2 shows two sets of functions, T and A , for period 1 in solid lines and for period 2 in intermittent lines. It also shows a lower boundary of x , at x^- . If in period 1, x^- is exceeded then in period 2, the principal pushes the A function to the right because he expects more effort from the agent. It is as if the principal pushes the lower boundary from e' to x^- . If the agent minimises his costs in period 2, the optimum effort is given by x_2^* . But T_2 at x_2^* is higher than T_1 at x_1^* . Therefore, the agent has a strong incentive not to minimise costs in period 1 because x_1^* exceeds the threshold value of x^- . Therefore, he wilfully underperforms and stays at x_1 in order not to give a signal to the principal by exceeding x^- .

We now have to adjust our previous conclusions. If there is no learning then ESMA will actively regulate. However, in a dynamic context where learning occurs, ESMA may have an incentive to underperform so as to jam the signals to the principal.

The principals of ESMA, like any principal who interacts intertemporally with an agent, have to devise ways of

Figure 2
Effort and learning over time



Source: Own elaboration.

assessing the performance of ESMA, not simply by observing the outcome of its actions but, in addition, by forming expectations as to its future performance and outcomes.

There are several ways they can form expectations about future performance. They can predict performance on the basis of theoretical models. This is akin to asking how another agent or a typical agent would act in the same situation. Or they can empirically observe what other agents actually do in similar situations. Both the theoretical and empirical method in fact establish a benchmark of what can be reasonably expected. But whatever they choose to do, there are consequences for both the principal, who has to exert more effort in control activities, and the agent, who has to work harder.

This situation can be modelled as a game where two players, a principal and an agent, may respectively choose to control or trust and to work or shirk. This can be shown in terms of payoff values expressing the return for ESMA and the EU. Let's assume the following payoffs which take into account possible accountability mechanisms:

For ESMA: +2 if it works hard without being controlled by the EU; +1 if it works hard but under the control of the EU; +3 if it shirks without being controlled and -1 if it shirks but it is controlled by the EU.

For the EU: +3 if ESMA works hard without having to control it; and +2 if ESMA works hard but only when the EU controls it; -2 if ESMA shirks without any control and -1 if ESMA shirks but it is controlled by the EU. The situa-

Table 1
EU / ESMA accountability mechanism

ESMA \ EU	T	C
W	2, 3	1, 2
S	3, -2	-1, -1

Source: Own elaboration.

tion just described is represented in the payoff matrix in Table 1.

With these payoffs, there is no dominant strategy that can form a Nash equilibrium. If the EU trusts, then ESMA will choose to shirk. If the EU controls, ESMA will work. The same applies to the EU. If ESMA works, the EU will trust it. If it shirks, the EU will control it.

However, we can determine the probability p of trusting and controlling that can generate the same payoff for the principal (i.e. the EU). This results from equalising the payoffs from choices T and C to have the same expected returns from trusting ESMA actions or from deciding to check the outcome produced, i.e.

$$3p - 2(1 - p) = 2p - (1 - p) \Rightarrow p_{EU} = \frac{1}{2}.$$

Therefore, in a context where the principal and the agent learn over time from past actions, if the EU succeeds to convince ESMA that there is a 50 per cent chance of being checked for its behaviour, this will result in the same welfare gain irrespective of whether the EU actually decides to exercise its control or not.

Indeed, if we consider the probability q of working or shirking that can generate the same payoff for the agent, then:

$$2q + (1 - q) = 3q - (1 - q) \Rightarrow q_{ESMA} = \frac{2}{3}.$$

The agent is more likely to work.

This result shows that we can design an institutional framework in which the EU can allow the agent to accomplish its duties independently, as long as the agent

Table 2
Static coordination game

ESMA \ EU	T	C
W	1, 1	0, 0
S	0, 0	x, x^{\sim}

With $0 < x^{\sim} < x < 1$.

Source: Own elaboration.

credibly considers the possibility that it can be asked to justify its actions or that it can be assessed through other means.

More generally, we can also see this as a coordination game in which the parties can realise gains by making mutually consistent decisions over not only the type of actions but also the two minimum levels of effort x (generic) and x^{\sim} . In this case both the principal and the agent obtain joint benefits in, respectively, trusting and exerting high levels of effort at the same time. We can assume this situation to be described by a payoff structure represented in Table 2.

In Table 2 we see that neither the principal, nor the agent derive any gain from having non-coordinated decisions. Both of them bear the burden from lack of coordination. If the agent chooses to work and the principal to control, since the agent carries out his duties, the principal wastes resources in checking the agent. The agent also suffers a loss because of the control exerted by the principal over his actions. If the principal chooses to trust and the agent to work or the agent shirks and the principal controls, then in the first case they obtain the highest payoffs (they are assumed to be equal for both players) while in the second case the payoffs are equal to the two minimum thresholds of effort x and x^{\sim} . This outcome is undesirable because payoffs are lower than in the case where the principal and the agent avoid waste of resources by coordinating their behaviour.

In a static coordination game where both the principal and the agent take decisions at the same time having all possible information about the other player's payoffs – with the highest payoffs occurring when they choose the same strategy – there are two possible equilibria. One would be characterised by the choice of working for the agent (W) and trusting for the principal (T), and the other by the choice of shirking (S) and controlling (C). However, in a static framework we are not able to say which one is

more likely to occur. Nevertheless, we can consider a dynamic framework where both the principal and the agent do not know which choice of the other player will actually take place.

Considering the pairs of choices working versus trusting and shirking versus controlling, it is possible to determine the probability such that both the EU and ESMA have the same expected gain irrespectively of which pair is actually chosen. This can happen in relation to the probability of being indifferent in terms of payoff between their choices.

Starting from the agent and assuming both his choices are equally likely to happen, these have to be both best responses to the principal's probabilities of trusting and controlling, respectively p and $1 - p$, in order to make the agent indifferent between working and shirking. The same applies to the principal in terms of the probability q that the agent is willing to commit himself to work.

Formally this will be such that – for the agent – the expected payoffs of working and shirking in terms of the probabilities (p and $1 - p$) of trusting and controlling are equalised. For the principal instead this will be in terms of the agent's probabilities of working and shirking (q and $1 - q$), i.e.

$$\text{ESMA: } p = (1 - p)x$$

and

$$\text{EU: } q = (1 - q)x^{\sim}$$

which lead to the equilibrium probabilities:

$$p_{EU} = \frac{x}{1 + x} \text{ and } q_{ESMA} = \frac{x^{\sim}}{1 + x^{\sim}}.$$

These reflect how likely the agent and the principals are to be indifferent between their choices. More specifically this means that in order to make the principal indifferent between controlling and trusting, ESMA will have to choose to work with a probability $q = x^{\sim}/(1 + x^{\sim})$ and conversely to shirk with

$$1 - q = 1 - \frac{x^{\sim}}{1 + x^{\sim}} = \frac{1}{1 + x^{\sim}}.$$

ESMA instead will be indifferent between working and shirking if the principal chooses to trust with a probability

Table 3

Dynamic coordination game

		p		$1 - p$
		$\frac{x}{1 + x}$	$\frac{1}{1 + x^{\sim}}$	
		EU	T	C
		ESMA		
q	$\frac{x^{\sim}}{1 + x^{\sim}}$	W	1, 1	0, 0
$1 - q$	$\frac{1}{1 + x^{\sim}}$	S	0, 0	x, x^{\sim}

Source: Own elaboration.

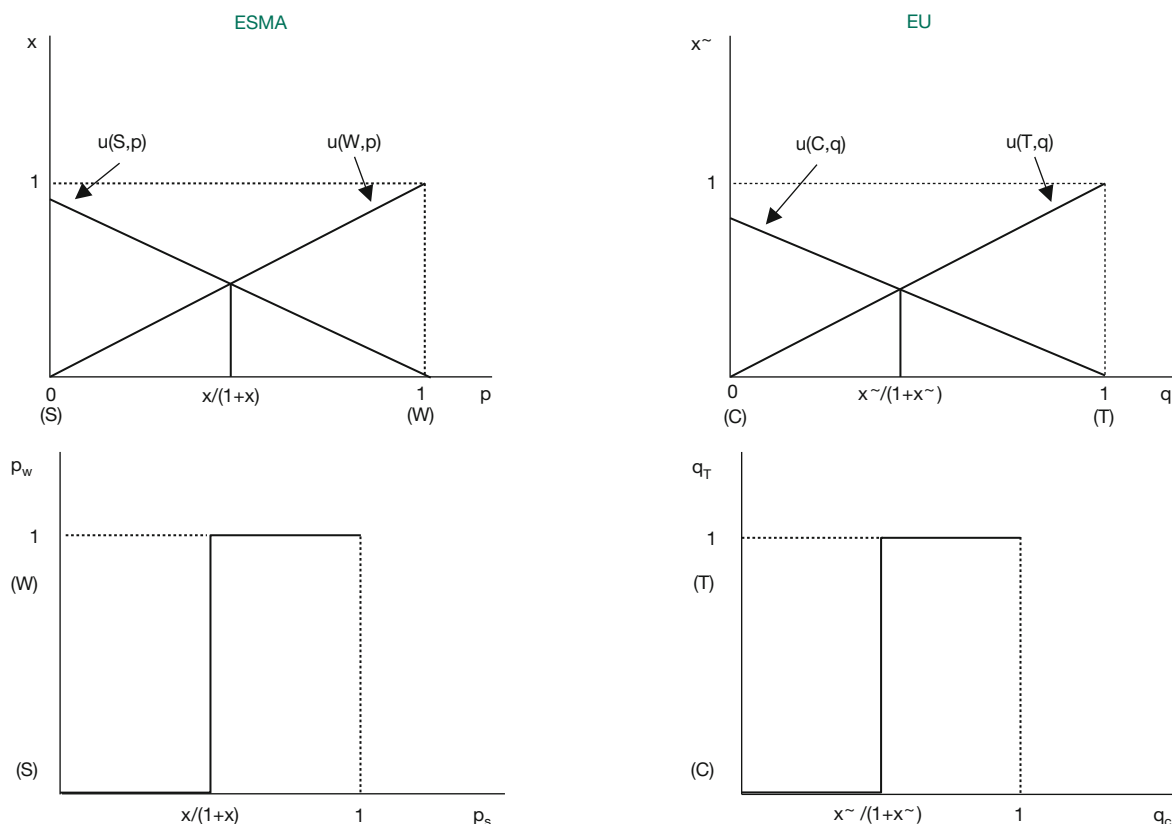
$p = x/(1 + x)$ and to control for $1 - p = 1 - \frac{x}{1 + x} = \frac{1}{1 + x}$. This is represented in Table 3.

It is interesting to note that in this case a larger minimum level of effort, x and x^{\sim} , does not result in a larger probability of the agent to choose to shirk, and for the principal to control. Conversely, this would simply denote a change in the probability of being indifferent between the two actions. This means that, again, enforcing a certain (higher) level of effort by the agent does not necessarily produce better results, particularly considering the (higher) cost borne by both parties for this enforcement. An increase in the minimum threshold of required effort might indeed simply cause the agent to strictly commit to this minimum level refusing to perform any better, in turn lowering dramatically any chances for the principal to observe an effort above the threshold. This is also because increasing the minimum level of effort demanded will only increase the indifference between the pairs of choices, without really affecting the likelihood of any of them to occur.

This situation is represented graphically in Figure 3 where ESMA's best response functions for the two choices (W, S) and (T, C) are shown in terms of the probability p and q of realising the same gains in both cases. In the first sequence of graphs this is done for the agent on the left hand side in terms of the utility resulting from the level of effort x and the probability p and $1 - p$ associated to the principal's choices (T, C). This results into the best responses representing the agent strategies that produce the highest payoff given what the principal is doing. The intersection of the two best response functions gives the Nash equilibrium of this game where nobody can receive a greater payoff from changing actions (i.e. deviating unilaterally), assuming the other player maintains his strategy.

Looking at the agent's utility in choosing to work when the principal might decide to trust his actions with a prob-

Figure 3
Best response functions in a coordination game



Source: Own elaboration.

ability p , the expected payoff is simply equal to this very same probability, i.e. $u(W, p) = p$. On the other hand, the expected payoffs associated to the agent's choice of shirking results in a utility level $u(S, p) = (1 - p)x$. In this latter case if the principal chooses to trust with a probability p equal to zero this delivers a payoff equal to x (with $0 < x < 1$), whereas if p instead equals 1 then the level of effort as well as the associated payoff becomes null.

The graph on the right hand side repeats the same analysis for the principal's choices (T, C) this time considering the minimum level of effort desired x^{\sim} and the probabilities q and $1 - q$ associated to the agent's choices (W, S). In this case everything is analogous to the previous one, just the intersection of the two curves happens earlier along the horizontal axis since $x^{\sim} < x$.

The second series of graphs instead simply maps this situation in terms of the probabilities p and q associated respectively to the choices (W, S) and (T, C). This is done by looking at the best responses for both choices represented in the previous graphs. Considering the agent's utility for (W, S), we can see the choice of shirking delivers a higher outcome for a probability $0 < p_s < x/(x+1)$. On the

other hand, working is better for $p_w > x/(x+1)$, whereas the agent is indifferent in terms of the two choices if $p_w = p_s = x/(x+1)$. The same logic applies to the principal's utility resulting from the pair of choices (T, C).

Furthermore, it is also possible to introduce an incentive mechanism to induce both the agent and the principal to coordinate their choices over the decision of respectively working and trusting. For this to happen, it is enough to increase either the payoff of ESMA in case it commits to work and the principal runs a check over its actions, or the payoff of the principal in the unhappy case where he trusts the agent and the latter chooses to shirk – as if a compensation for the agent's inefficiency was introduced.

The new payoff structure just described is represented in Table 4.

From Table 4 we can see that the principal's probability of trusting that could induce ESMA to prefer to commit to a high level of effort is such that it makes the expected gain from working greater than the one from shirking, i.e.

$$p + (1 - p)x > (1 - p)x$$

Table 4
Incentive mechanism for coordination

	EU	T	C
ESMA			
W		1, 1	x, 0
S		0, x	x, x [~]

Source: Own elaboration.

so to have:

$$p > 0.$$

Hence the simple introduction of an incentive for the agent to commit even when the principal checks his action is enough to motivate him to perform at his best. Indeed for the principal is now sufficient to be even slightly likely to trust (in fact whatever $p > 0$ is enough) to have the agent willing to provide high levels of effort rather than shirking. As said before an analogous result could then be showed in terms of the agent's probability q that could induce the principal to be more in favour of trusting rather than controlling, provided that compensation for the agent's inefficiency is offered in case the latter chooses to be unproductive.

Therefore, in order to achieve a better outcome with reduced costs, it is not enough for the principal to implement a credible and effective accountability mechanism. He also needs to resist the temptation of adapting it too often or making it too strict because this would, on the one hand, raise the costs connected to the regulatory process and, on the other, he reduce the value of the outcome delivered by the agent. The latter in fact needs to be granted some independence to exert effort higher than the minimum requirements to perform its standard tasks. It is also necessary to have a framework where both the principal and the agent can learn from their past actions to finally arrive at a stable equilibrium where, as a result of a dynamic process, the decisions of both sides converge towards the welfare maximising choices for the whole society.

Conclusions

This paper has considered how tasks can be delegated to agencies which are entrusted with enforcement responsibilities. The degree of accountability and the extent of independence of the agent have a decisive influence on the behaviour of the agent.

The main conclusions that can be drawn from our analysis are as follows:

- If the results that are desired by the principal cannot be fully described *ex ante*, then the agent needs to enjoy a certain degree of independence.⁵
- In order to ensure that independence is not abused, the agent also needs to be accountable.
- There is a trade-off between independence and accountability in the sense that constraining the choices of the agent also make him accountable/responsible for fewer possible outcomes.
- The principal should be concerned about the effectiveness of accountability mechanisms.
- The agent has an incentive to be active but will not try very hard if he incurs costs. In a dynamic setting the agent may wilfully underperform so as to jam signals to the principal.
- The principal needs to have a benchmark to assess the actual performance of the agent. The benchmark is the expected performance of a typical agent, if such an agent can be identified theoretically or empirically.
- Under conditions of imperfect information about desired market outcomes and about the true ability of the agent, accountability in the form of *ex post* assessment of performance is probably more effective than in the form of *ex ante* control of the agent's choices.⁶
- Any form of control by the principal is costly for both the principal and the agent. It is in their long-term interest to cooperate whereby there is neither excessive control, nor shirking.
- It follows that the control by the principal and the accountability of the agent are activities that evolve over time.

The implications of the above conclusions for ESMA and other policy-making and enforcement agencies are stark but rather simple. The Meroni doctrine, according to which tasks must be well-defined in advance, is an inappropriate instrument of control by principals, which are the EU and its member states. Those agencies need to have wide discretion while at the same time being subject to more stringent accountability mechanisms so that they adequately explain and justify their decisions.

⁵ See M. Scholten: Independent, Hence Unaccountable?, op. cit.

⁶ See M. Scholten: Independence vs. Accountability ..., op. cit.