

Parametric policies from the compensation perspective

Compensation for damages based on a predefined index recognised by the parties is a new development for the insurance market that may foster broader coverage of risks where currently onerous for insurers and policyholders. Similarities to solutions already in use help refute the objection relating to the compensation principle

 **Authors: Maurizio Hazan, lawyer at the law firm THMR, and Stefano Semolini, Group General Counsel REVO**

S.p.A.

Modern insurance faces challenges that go hand-in-hand with an evolving social consciousness that gradually seems to be acknowledging a need to address, sustain and share the risks of our times. Often, these are new risks linked to major technological developments; in some cases, they are very severe, with an impact of potentially catastrophic scope (the recent pandemic crisis provides one stark, unfortunate example). The expansion of insurance forms to new areas of risk and new needs for protection and support entails original models of coverage that deviate from the traditional approach to create innovative service solutions that also harness the extraordinary potential of new technologies.

The idea that seems to be gaining ground, in the background, is that modern “non-life insurance” is deviating from the rigid compensation schemes implied by the traditional structure to take on a broader function of protection and prevention, based on (education concerning) responsible management of insured risks rather than (merely) transferring the related costs to the insurer. Better – of course – to live in more secure conditions and avoid the loss than suffer it and then be compensated.

Towards a new concept of insurance

This new concept – more open and a less focused on compensation, narrowly defined – leads to reflections on persistent theoretical dogmas championed by a certain line of thinking that now merit reconsideration and perhaps rethinking (including the absolute inviolability of the compensation principle). These reflections also then need to consider specific forms of coverage that – driven by processes largely based on the use of new technologies – constitute insurance models very far from those that existed when the Italian Civil Code was written. In this article, we will discuss what are known as “parametric” policies, the ongoing development of which merits thorough analysis. This is a relatively novel insurance product that began to be created and developed in the '90s on the foreign reinsurance market (mainly in countries exposed to intense meteorological phenomena) with the chief goal of meeting (re)insurance needs relating primarily to catastrophic atmospheric events.

Also known in the industry as "index-based", such policies are designed to combine convergent and, to some extent, symmetrical needs:

- on the one hand, those of customers, interested in rapid, streamlined and, above all, efficient insurance service, designed to pay out compensation more quickly due to the absence of particular formalities or burdensome investigations: a loss is considered to have been suffered when certain objective conditions (parameters or indices) are met, forming a basis for presuming damages contractually accepted by the parties. A claim is not normally necessary, nor is the (otherwise) usual process of providing the measurement of the damages, as it is contractually presumed to be proved;
- on the other, those of the insurer, interested in standing out on the market for simple, effective products and in structuring insurance coverage in which the costs of managing the claim are radically cut, due precisely to the streamlined claims adjustment phase, made considerably more agile by the automated parametric mechanisms established in the policy.

Lower management costs and less litigation risk

These solutions tend, of course, to reduce the scope for dispute between the parties, with considerable benefits in terms of avoiding litigation. Yet it is above all the lower costs of managing the phases of claim adjustment and litigation (not to mention the risk of fraud) that also make it possible to imagine the use of parametric policies in settings in which traditional policies would probably not be optimal or at least not would not be as efficient. In particular, the reference is to catastrophic natural events (such as earthquakes, floods and exceptional rainfall) the severity of which could entail simultaneous, variable losses that are financially unsustainable in amount and difficult to analyse for adjustment purposes. More specifically, there are traditional, non-parametric policies on the Italian insurance market that provide cover against catastrophic events, but they are generally very expensive policies – partly due to lack of tax exemptions for premiums, as in other countries – and characterised by anti-selection. Moreover, such cover is almost always offered by insurance companies in combination with All Risk or fire cover, and very rarely on its own. On the other hand, parametric policies, which by nature are less expensive, simpler and more immediate in their operations and can also be structured as stand-alone cover, satisfy this latent demand for catastrophe insurance and therefore meet an important social need.

Lower management costs and compensation set as a lump sum in advance can thus effectively help facilitate the underwriting of anomalous, widespread risks, including as “micro-insurance” (with very small premiums for risks with a small economic impact shared by large numbers of beneficiaries) or as part of integrated coverage plans that also provide for a role for the government in offering economic support to communities affected by loss events.

Endorsement by EIPOA and IVASS

Moreover, the parametric system, while based on “indices” that by their nature are not personalised but measure events with a (generally) broad, collective impact, may also

work for groups of limited insured parties with risks more easily able to be shared, even if they relate, for example, to anomalous climatic conditions (such as the disruption of activities due to exceptional local precipitation) or automatic detection of service outages or delays (cancellation of concerts, flight delays, cancellations of travel and so forth). However, it should be noted that parametric policies have received – at least at the methodological level – an important institutional endorsement, within the framework of the **EIOPA** guidelines on digitalisation, automation and development of smart contracts. In this regard, **IVASS** actively participated in the EIOPA initiatives in these fields and in 2019 a trial of products using parametric logic was completed. Following this trial, IVASS observed a “significant reduction in the time to issue policies and adjustment times compared with the average for similar products, as well as a general improvement in the customer experience.”

However, the clearly innovative value of such a service, openly designed to revisit the classic, traditional schemes, must be put to a “stress test” and adapted to the relevant regulations, with a particular focus on certain basic insurance principles.

The conceptual boundaries of the compensation principle

It will now be appropriate to turn to the aforementioned issue of the compensation principle, considered by some to be a matter of public policy and thus inviolable. This poses the question of whether the settlement of a “parametric” claim – without concrete ascertainment of the damages – poses a risk that the (automated) payment of compensation might not correspond to an actual loss or that the loss suffered might be of lesser value than the reimbursement obtained. In other words, the analysis must focus on the question of the insurance interest (Article 1904 of the Italian Civil Code), the nature of the service promised by the insurer as compensation and its actual regulation (subject to Articles 1905 et seq. of the Italian Civil Code).

First and foremost, it must be determined whether the compensation principle is truly a limit that is always and in all cases inviolable or whether it can be waived or, at least, read and applied in more flexible terms. As is common knowledge, this compensation principle is intended to protect against distortions in application, which could result in an increase in the insured party's assets due to the payment of the compensation. This would distort the cause of the insurance contract from a mechanism for transferring a certain risk into a means of economic speculation – essentially a wager. However, whether this principle is inviolable is not entirely a settled question, since legal scholarship and case law have often been divided, supporting two interpretations that are to some extent opposed to each other:

- the first is that the compensation principle (and the provisions governing it – Articles 1904, 1905, 1907 et seq., 1910 and 1916 of the Italian Civil Code) is inviolable and cannot be set aside, even when beneficial to the insured;
- the second argues they can be set aside by agreement, as is also often the case for Articles 1910 and 1916 of the Italian Civil Code, as well as by market negotiation practice (for example in the context of product solutions with “value as new” compensation clauses).

Estimation is the solution where the damages are difficult to prove

Such theoretical differences have, at times, fostered the adoption of “open” settlement models, not overly tied to strict observance of the rule of the absolute inviolability of the limit of damage actually suffered by the insured. Consider, for example, the aforementioned rather widespread clauses providing compensation for the loss of an asset equal to its value “as new”, even if the claim occurs years later, but also the widespread insurance solutions for financial losses due to disruption of business or hospitalisation, where the amount of the compensation is frequently set as a lump sum, and as such is paid without ever having to verify whether the lump sum corresponds to actual damage suffered by the insured. Nor does it seem overly bold to affirm (in full accordance with French law) that the compensation principle is, for the most part, focused on damage to property and to persons (see the provisions of *Code des assurances*, Articles L-131-1 and L-131-2).

Separate consideration should then be given to the second paragraph of Article 1908 of the Italian Civil Code, which states that “The value of insured items may nevertheless be established at the time of conclusion of the contract, by an estimate accepted in writing by the parties.” Many have claimed that an estimated policy deviates from the compensation principle, as it compensates not according to the value of the asset at the time of the claim, but to the agreements reached by the contracting parties. However, this exception should not constitute a gross deviation from the corresponding rule governing all compensation: the estimate should be reasonable as the damage (and the value of the asset) is not easy to prove. Estimating in fact means determining the value of an asset and the estimation process would seem unnecessary where the asset, and the consequent possible damage, has a (very) easily ascertained market value.

An exception that already applies to certain insurance market needs

The classic domain of estimated policies is that of the insurance of works of art, in which appraising the work, and thus the damage, is not always easy. Yet there is no reason why an estimate cannot be used where the damage resulting from the loss of an asset might not be limited to the strict loss of the value of the asset itself, but entails other potential financial losses relating to a potential loss of profit (Article 1905, paragraph 2) deriving from the loss of the asset, replacement costs or even elements of non-financial damage relating to the unavailability of the lost or deteriorated asset (e.g. arson affecting a home). Moreover, an estimate could make sense whenever the collective scope of certain risk phenomena, involving a potential accumulation of claims following a single event, is such as to suggest simplified, predetermined settlement techniques in terms of values, in order to avoid increases in costs relating to ordinary settlement procedures that would make the insurance process difficult to sustain, except with extremely costly premiums. However, it appears reasonable to state that the rationale of Article 1908 expressly confirms that the parties, when stipulating the policy, may agree on a shared (pre)determination of the value of the insured asset, in order to avoid burdensome investigations and possible conflicts at the time of settlement.

This does not in any way violate the compensation principle, nor does it result in insurance solutions aimed at obtaining undue compensation because they do not correspond to the actual amount of the damage. On the contrary, these contractual techniques tend to provide a settlement service corresponding to the loss (or a portion of the loss) expected in advance when the loss occurs. The amount of this loss is established by the parties in the policy, obviating a concrete assessment of its amount.

Similar considerations may also apply to parametric policies: not so much (or not only) in relation to quantifying the damage, as to the contractual establishment of rules allowing a claim to be considered (beforehand) to have been proved when certain indices occur.

The Oracle is the third party that allows the claim to be settled

The main difference between parametric and traditional policies relates to the way in which claims are established, calculated and thus settled. The right to insurance services (predetermined in terms of its amount or at least in the rule for calculating it) arises as a result of a "loss", which occurs when objectively measurable phenomena, called "parameters" or "indices", have been recorded, as precisely identified in the contractual text. The burden of proving whether or not the indices (or parameters) have occurred does not lie with either of the parties, since, as mentioned above, they are objectively measurable and therefore subject to objective determination by the measurement system, referred in technical jargon as an "**Oracle**" and normally managed by a third party. This automatic verification mechanism, which may be followed by prompt, automatic settlement, is the defining trait of this type of insurance and therefore incorporates and specifies the subject-matter of the agreement between the parties, which contractually agree to consider the loss event to have occurred, without the need for a claim filing (pursuant to Article 1913 of the Italian Civil Code), when the threshold values set for the parameter are reached. These values are not causally irrelevant to the statistical probability of occurrence of the loss event. On the contrary, the indicators are causally correlated with the actual occurrence of the damage/loss, on the basis of a prior, in-depth investigation supported by a series of statistical observations over time. If these indices did not represent, according to the principle of *id quod plerumque accidit*, nearly certain causal attributability – a damage index/parameter – the transaction would be contrary to the purpose of insurance, thereby undermining the interest pursuant to Article 1904 of the Italian Civil Code and degrading the contract from insurance to gambling.

The technical means needed to argue for a sustainable presumption are therefore essential to supporting the feasibility of the transaction.

The causal link between indexed phenomena and estimated damage is determined (presumptively) according to predetermined scientific criteria (agri-meteorological mathematical models) and statistical criteria (index historical series/output). The peculiarity of parametric policies lies in the different approach to the process of ascertaining the damage and determining and paying compensation. The occurrence of the index(es) itself constitutes the loss, exempting the insured from the obligation of proving it has in fact occurred (and the company from objecting it has not or excluding it from the scope of cover). For this reason, and to protect the objectivity of occurrence, index measurement

should be entrusted to an objective measurement system, preferably and as a rule entrusted to the management of a third party (the "Oracle"). This automatic assessment mechanism is normally followed by smart, equally automatic settlement of the compensation, according to the procedures described in the policy.

Identifying indices requires thorough, scientifically based study

Parametric policies therefore significantly simplify traditional insurance processes: it is no longer just a question of contractually predetermining the amount of the damage in the event of a claim, but, still earlier, predetermining automatic claim assessment processes, leading a loss to be assumed when certain phenomena occur, witnessed by the reaching of certain threshold values of the contractually established indices (and measured/recorded by the Oracle).

The above index-based presumptive mechanism safeguards the compensation principle – and does not undermine it – precisely because it is based on the previous study of a very high probability correlation between the occurrence of the indices and the damage (failing which it would be a kind of bet, in which the payment service would end up being linked to potentially irrelevant events or circumstances, in terms of damage, for the insured). Thus the parameters underlying the contract should be determined on the basis of historical data series that are sufficiently extended over time and significantly linked to the event to be covered, as well as according to scientific, mathematical and statistical criteria. The parameters must be effective and functional to stating in advance that their occurrence corresponds to the damage covered by the policy: the intention pursued by the parties by entering into the contract therefore remains to compensate the insured for the damage and not to pay the insured an amount unrelated to the extent of the damage suffered. This can be stated without fear of contradiction by those who claim that this process violates the causal compensation scheme of a non-life policy.

A balanced agreement on proof is key

Precisely because it revolves around a presumption that must be adequately described in the policy, the parametric mechanism for ascertaining damages seems to constitute a contractual agreement on proof. In fact, the parties agree on a precise “indexed” rule for ascertaining the occurrence of the loss, the causal link and the consequent damage. The contractual agreement on proof is fully lawful insofar as it complies with the provisions of Article 2968 of the Civil Code and therefore does not make it excessively difficult for one of the parties to exercise the right. In keeping with those authoritative experts who consider the rules on the burden of proof to be of a substantive nature, it does not seem inappropriate to affirm that agreeing to the aforementioned indices can constitute an agreement on proof, although some legal experts have proposed different interpretative solutions focusing on the subject-matter of the contract. It has indeed been argued that agreement on indices – and, more specifically, the algorithmic processing of parameters – represents a kind of contractual assessment that “is upstream of contractual settlement” (Santagata, “Parametric (or index-based) insurance policies and indemnity principle”, in *Rivista di diritto civile*, 2022, I, 169 et seq.) or may possibly be attributed to the institution

of arbitration, pursuant to Article 1349 of the Civil Code. In our view, these alternative reconstructions miss the mark, because they aim to confuse the objective result of the parameter (to which a given compensation effect is linked automatically and by contract) with the technical assessment (of proximity) of a single phenomenon in order to verify whether it is eligible for compensation or determine its amount.

Claim filing is handled by parametric event detection system

Of course, the adoption of a parametric model, which is in itself innovative, requires that basic insurance rules be adapted to these new contractual schemes.

The issue extends, for example, to claim filing, which in traditional policies constitutes a decisive obligation for the insured, on penalty of loss/reduction of the right to compensation, in accordance with the combined provisions of Articles 1913 and 1915 of the Italian Civil Code.

Now, regardless of whether it is a smart contract, a parametric policy has a structure such that both parties are in a position to become promptly aware of the loss event thanks to the monitoring and detection carried out by the Oracle. It is thus evident that the intervention of Oracle in the contractual process levels out the asymmetry of information relating to establishment of the loss, rendering claim filing superfluous in this respect. Indeed, notification from the Oracle of the occurrence of the loss event well fulfils one of the functions of a claim filing by allowing the insurer to promptly ascertain the causes of the loss event and the extent of the damage (substantially in real time).

If the data observed by the Oracle constitute contractual (presumptive) proof of the event that gives rise to the right to compensation, it is logical that they are also valid as a report of the event pursuant to Article 1913 of the Italian Civil Code. This is fully consistent with the principle of good faith and integrity in the performance of a contract.

In conclusion, a parametric contract, regardless of its assumptive, actuarial nature, is designed and formulated by the parties to comply with the compensation principle and thus compensate the insured to an extent if not equal to in any case very close to the actual damage suffered. Ultimately, through the parametric contractual scheme, the parties do not aim to aside the typical compensation function (prevalent but by no means exclusive) of the non-life insurance contract (regardless of whether it may be considered inviolable). On the contrary, they preserve it by adopting a priori compensation rules intended to safeguard it. All this gives rise to a series of virtuous effects in terms of reduced costs, problems and management costs in the settlement phase, making the insurance transaction more sustainable and accessible under more favourable premium conditions.

In with the new, then! In harmony with the law, but without old doubts and preconceptions.