Independent Actuarial Valuation of Damages Suffered by Traffic Accident Victims: The Spanish Model and its Regulatory and Legal Update

Dr. Rafael Moreno Ruiz (PhD). Universidad de Málaga.

Dr. Luis Sáez de Jauregui (PhD). Universidad Carlos III de Madrid.

6th European
Congress of Actuaries
www.eca2026.org

About the speakers

- **Dr. Rafael Moreno Ruiz (PhD)**

  Professor. Universidad de Málaga.

  President of the Instituto de Actuarios de España 2020-2024.

  Director of the Actuarial Observatory for the valuation of economic damages caused to persons in accidents of the Instituto de Actuarios de España.

- **Dr. Luis Sáez de Jauregui (PhD)**

  ExComm Member at Axa Spain & Member of the Axa Group Senior Executives (GLN).

  Professor. Universidad Carlos III de Madrid.
  President of the Instituto de Actuarios de España 2012-2016.

Why does this matter?

Valuing personal injury is one of the most human applications of actuarial science

- Traffic accidents generate long-term economic and personal consequences
- Compensation must balance legal certainty and individual fairness
- Actuarial assumptions directly affect victims' lifetime compensation

Key message:

Actuaries help translating human loss into a fair, explainable economic value.

The Spanish Baremo in one sentence

The Spanish Baremo is a legal-actuarial framework for compensating bodily injuries caused by road traffic accidents.

It combines:

- Legal categories of damage
- Standardised compensation tables
- Actuarial valuation techniques
- Economic assumptions
- Judicial application
- Individual case assessment

Key message:

It is a structured compensation system.

Road traffic accidents and other accidents

Traffic

Occupational

Medical

Other accidents where there is a responsible party for the damages suffered by injured or affected persons

Types of damages (injured/affected persons)

1) **Damages related with incomes or expenses (economic damages)**
   - **Loss of earnings**
     - Disability of the victim
     - Death of the victim
   - **New expenditures**
     - Assistance from third person
     - Protesis and orthoses
     - Medical and rehabilitation
     - Mobility restrictions/needs
     - Housing adaptation
     - ....
2) **Damages not related with incomes or expenses (non-economic damages)**

Fundamental principles of the (legal) compensation system

- **Well being of society – Public interest**: any citizen can be a victim of a road accident or be affected by the consequences of a road accident, so it is in the interest of the society as a whole to seek fair compensation
- **Full compensation**: the main aim is to try to restore the situation of every injured or affected person as far and as well as possible to what it was before the accident
- **Vertebrate compensation**: the different damages must be assessed separately, according to its nature

Special nature of the (legal) compensation system

- Its aim is to protect any injured or affected person, not (only) insurance consumers
- Compensation should be for the amounts that compensate for the damage caused (fair), not for any insured amount
- Insurance is compulsory by Law for the responsible parties, so that they bear the overall cost of accidents in the society
- So it can be considered a **social protection system**

Economic damages – Asessment models

- **Many of the economic damages (may) correspond to a permanent situation over time (long term)**
- **So application of Actuarial Models from Life Insurance is needed. Different options and hypothesis in the models to be defined:**
  - Specific mortality tables (general population)
  - In cases of victim's death: several lives (affected people)
  - Maturation period: annual or less than one year
  - Inflation (costs)
  - Income growth rates
  - Rate of interest
  - Social Security pensions and other public benefits

Types of (legal) compensation systems for economic damages

First criteria

- **Type 1: Open list of damages**
  - Pro: full compensation
  - Con: complexity
- **Type 2: Closed list of damages**
  - Pro: not full (partial) compensation
  - Con: simplicity

Types of (legal) compensation systems for economic damages

Second criteria

- **Type 1: Gross losses compensations**
  - Pro: simplicity
  - Con: possible overcompensation
- **Type 2: Net losses compensations**
  - Pro: proper compensation
  - Cons:
    - Complexity
    - Third party to be compensated by the responsible (Social Security system or the State)

Types of (legal) compensation systems for economic damages

Third criteria

- **Type 1: Compensation tables/scales**
  - Pro: agility
  - Con: not necessarily full compensation
- **Type 2: Individual assessments**
  - Pro: full/fair compensation
  - Con: complexity, slow process and more costs
- **Type 3: Compensation scales, but individual assessments in certain cases**
  - Pro: Pros of the two types
  - Con: Possible partial use for convenience (companies)

Roles of the actuarial profession

- In any type of system, economic damages must be assessed applying actuarial models (life)
- Well being of society - Public interest require that the actuarial profession is involved in different ways
- Both in systems based on scales and in systems based on individual assessments, the profession must participate:
  - In the definition of the different parts and elements of the model and in every periodical review
  - In every process of scales calculations

Role of the independent actuary

- In systems based on individual assessments of economic damages or hybrid systems, those which requiere applying actuarial models must be made by an actuary
- The relevant expert‘s report must be signed by an actuary

- This role of the independent actuary is the guarantee of a fair valuation of the compensations for the injured and affected persons.

Regulatory and legal update

The 2025 reform: continuity with targeted improvements

The 2025 update:

- Transposes elements of the EU Motor Insurance Directive.
- Extends and clarifies concepts such as “motor vehicle” and “traffic event”.
- Incorporates recommendations from the Monitoring Commission.
- Improves victim protection.
- Maintains the core structure and principles of the system.
- Reinforces the need for regular technical review.

The Spanish Supreme Court allows the use of the traffic accident scale to assess damages in workplace accidents. While its application is not legally mandatory, the Supreme Court considers it an excellent orientative guide to determine civil liability compensation.

Regulatory and legal update

The 2025 reform: continuity with targeted improvements

Three thoughts

1. The Spanish Baremo is a mature legal-actuarial model.
2. Independent actuarial valuation remains essential, even in a table-based system.
3. Fair compensation is dynamic: mortality, wages, care costs, inflation and social expectations evolve.

In personal injury valuation, actuaries are part of the institutional promise that victims will be compensated fairly, consistently and transparently.

Conclussions and remarks

- The compensation system (Baremo) is a social protection system
- Very relevant roles of the profession and of actuaries in different types of systems/models
- It is a(n) (emerging) *wider field* for actuaries
- Public Interest: protection of the role of the independent actuary
  - Fit & Proper requirements for actuaries playing this roles
    - Education
    - Code of Conduct (+ Disciplinary Process)
    - Practice Standars – Specific Guidelines
  - Reservation of activity for actuaries in Spain

References

- Anderson, Donald R. (1986): *Actuarial Evidence. Valuing Past and Future Income.* Second edition. Carswell.
- Criterio del Pleno de la Sala Civil del Tribunal Supremo de 17 de junio de 2025. Sentencia del Tribunal Supremo STS 2866/2025.
- Gómez Pérez-Cacho, O., Moreno Ruiz, R., y Trigo Martínez, E. (2016). Análisis actuarial de la indemnización por necesidad de ayuda de tercera persona establecida en la Ley 35/2015, de 22 de septiembre. Economía Española y Protección Social, 8, 177–208.
- Gómez Pérez-Cacho, O., Moreno Ruiz, R., y Rubio Peña, E. (2022). La reducción de cuotas en las indemnizaciones por lucro cesante por fallecimiento en accidente de tráfico: Análisis del sistema vigente y propuesta del sistema alternativo. Anales del Instituto de Actuarios Españoles.
- Ley 35/2015, de 22 de septiembre, de reforma del sistema para la valoración de los daños y perjuicios causados a las personas en accidentes de circulación.
- Ley 5/2025, de 24 de julio, por la que se modifican el texto refundido de la Ley sobre responsabilidad civil y seguro en la circulación de vehículos a motor.
- Martín-Casals, M., y Sáez de Jáuregui, L. M. (2025). La reforma del sistema valorativo legal en la Ley 5/2025. BDS INESE.
- Moreno Ruiz, R., y Sáez de Jáuregui Sanz, L. M. (2025). El baremo de autos como instrumento para la gestión de riesgos. Actuarios, 56, 16–19.
- Orden ETD/949/2022, de 29 de septiembre, por la que se actualizan las bases técnicas actuariales.
- Sáez de Jáuregui Sanz, L. M. (2014). Baremo de autos. Bases técnicas actuariales en el nuevo sistema. Hipótesis económico-financieras y biométricas del sistema de valoración [Ponencia]. Jornada de UNESPA sobre el Baremo de Autos, Madrid, España.
- Sáez de Jáuregui Sanz, L. M. (2015). El nuevo baremo de auto: el gran esperado. Cinco Días.
- Sáez de Jáuregui Sanz, L. M. (2016). Análisis y contextualización de los aspectos de índole actuarial y de seguridad social de la Ley 35/2015 de reforma del sistema para la valoración de los daños y perjuicios causados a las personas en accidentes de circulación. Economía Española y Protección Social, 8, 107–138.
- Sáez de Jáuregui Sanz, L. M. (2018). El modelo actuarial contenido en la Ley del Baremo de Autos. Actuarios, 43, 29–44.

Thank you

Contact Details

- Luis Sáez de Jauregui: ljauregu@emp.uc3m.es
- Rafael Moreno Ruiz: moreno@uma.es; rafael.moreno@actuarios.org