# Assessment of the Effectiveness of Scrapping Schemes for Vehicles

## Country Profile Annex

Prepared For:

European Commission

DG Enterprise and Industry

Automotive Industry

Final Report

March 2010

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## List of Abbreviations

| | |
|---|---|
| ABS | Anti-lock Brake Systems |
| ACEA | European Automobile Manufacturers Association |
| AMVIR | Association of Motor Vehicle Importers Representatives |
| ANFAC | Spanish National Association of Motor Vehicles Manufacturers |
| APK | Algemene Periodieke Keuring (Technical certification in the Netherlands) |
| Bargain Price Downsizing | This is the consumer psychology where purchases are swayed by attempting to achieve the highest percentage discount. At the point of purchase the satisfaction of this can be higher than the expected utility of the good itself. In car scrapping schemes this leads to consumers choosing vehicles cheaper and smaller than they may have under non incentive conditions. The downsizing effect is caused as a pure side effect of bargain price maximization. |
| CNG | Compressed Natural Gas |
| $CO^2$ | Carbon Dioxide |
| Downsizing | Most commonly refers to a switch of consumer preference to smaller segment vehicles or engine options. In-fact the term downsizing can be slightly misleading or exaggerate the true effect because vehicles have been getting larger and heavier over time even within the same segment. |
| DPF | Diesel Particulate Filters |
| ECWVTA | EC Whole Vehicle Type Approval |
| EGR | Exhaust Gas Recirculation |
| ESC | Electronic Stability Control |
| ESP | Electronic Stability Programmes |
| EU | European Union |
| EV | Electric Vehicle |
| Fallback | Fallback is a term used to describe the falling back of sales to trend or equilibrium levels after a scheme has ended. The effective increase (i.e. return to normal) in net transactions price, once the scrapping incentives have been removed, will cause demand levels to fall back. |
| GANVAM | Spanish Association of Motor Vehicles Retailers |
| GDP | Gross Domestic Product |
| GHG | Greenhouse Gas |
| GVW | Gross Vehicle Weight |
| HV | Hybrid Vehicle |
| Incremental Demand/Sales | This refers to the net increase in vehicle sales over and above what would have occurred without the scheme. Since many vehicles would have been purchased in any case it is important to realize that this is not the same as the total number of vehicles funded under each scheme. |

| | |
|---|---|
| LCV | Light Commercial Vehicle |
| LPG | Liquid Petroleum Gas |
| Mandatory Funding | The term mandatory is used to include all publicly funded incentives PLUS all (usually matching) OEM contributions required under the conditions of the Scheme. |
| Marginal Scrapping Rate | The incremental change in scrapping between vehicles of different age expressed as a percentage (or between the same vehicle vintage as it ages) |
| MiTYC | Spanish Ministry of Industry, Trade and Tourism |
| MPG | Mile Per Gallon |
| MPV | Multi Purpose Vehicles |
| MS | Member States |
| MSRP | Manufacturer’s Suggested Retail Price |
| MV | Motor Vehicle |
| NIVS | Net Incremental Vehicle Sales |
| NIVV | Net Incremental Vehicle Value |
| NMS | New Member States |
| NoVA Tax | NormVerbraucherAbgabe (fuel consumption / pollution tax in Austria) |
| NOx | Nitrogen Oxide |
| OE | Original Equipment |
| OEM | Original Equipment Manufacturer – usually used to refer to the vehicle manufacturers themselves. |
| Parc | Total vehicles on the road, also called of 'units in operation'. |
| Payback | Payback is the amount, in units, that vehicle sales fall below 'trend' or equilibrium in the period immediately after the ending of the scrapping scheme. This is likely to be equivalent to the amount of 'pull forward'. |
| Payback Rate | Payback Rate is the total payback in units expressed as a percentage of the net incremental demand created while the scrapping scheme was in force. |
| PC | Private Consumption |
| PHV | Plug-in Hybrid Vehicle |
| PM | Particulate Matter |
| Pull Forward | Pull Froward is the number of vehicle transactions that occur during the incentive period that would otherwise have naturally taken place in an immediate future period. |
| PUP | Pickups |
| PYME | Small & Medium Size Business |
| R&D | Research and Development |
| SAAR | Seasonal adjusted annualized rate of vehicle sales. |

| | |
|---|---|
| Spillover | Spillover refers to vehicles funded, or ordered, during 2009 but which will be registered in 2010. This can result because the scheme was originally designed to run into 2010 or because the scheme allows for new registrations (and delivery) to occur after the scheme order books are closed. |
| SS | Scrapping Scheme |
| SUV | Sport Utility Vehicles |
| UNECE | United Nations Economic Commission for Europe |
| US | United States |
| VA | Value Added |
| VRT | Vehicle Registration Tax |
| W/SS | With Scrapping Scheme |
| Whole Market Elasticity | The term whole market means the new sales volume generated is gauged in relation to the total car market and not just the part of the market included in the scheme terms. |
| Wo/SS | Without Scrapping Scheme |

# Automotive Glossary

| Automotive Segment | |
|---|---|
| A | Utility/City class: entry level small passenger car |
| B | Supermini class: small passenger car |
| C | Lower and medium class: medium-sized passenger car |
| D | Upper medium and executive class |
| E | Large and luxury class |
| F | Super luxury class |
| MPV | Multi-purpose vehicle: compact car with higher aspect ratio (height length) |
| SUV | Sport Utility Vehicles: car-like ride/handling/ fuel efficiency |
| PUP | Car derived pickup |
| CDV | Car Derived Van: small van model derived from B segment car |
| LCV | Light commercial vehicle |

# 1 Austria

**Description**

Against the background of the sharpest economic recession in post-war times and an expected slump in new passenger car registrations by approx. 10% year-on-year from the already depressed level of 2008, in January 2009 the Austrian government has introduced a scrapping incentive scheme to support new car demand in 2009. The program was funded equally by the government and the car industry. The program started on 1 April 2009 and ended upon exploitation of the allocated budget on 8 July 2009.

In detail the program was tied to the following conditions:

- The beneficiaries of the program had to be natural (private) persons; any kind of corporate bodies were not supposed to benefit from the scheme
- The buyer of the new and the owner of the scrapped old car had to be identical
- The incentive scheme was limited to the passenger car sector (vehicle registration class M1); any kind of commercial vehicle sales have not been incentivized

The new car purchased had to be all new and to be registered for the first time to the applicant in Austria. It also had to comply with Euro 4 emission norms (which is mandatory for all new car registrations in the EU since 2006) or better

- The old car had to be scrapped with documented evidence and had to be at least 13 years old before scrapping (first registration before 1 January 1996) and registered to the applicant in Austria without cease for minimum one year before scrapping. It also had to be roadworthy as evidenced by a valid technical inspection certificate
- Finally the timing for purchase, application, registration and scrapping was conditional as outlined below.

**Budget**

The program was funded equally by the government and the car industry. The overall budget for the program was €45 million. The budget was thus enough to incentivize the purchase of 30,000 new cars—approximately 10% of Austria's "normal" market volume.

**Incentive Value**

The value of the incentive paid per car under the scrapping scheme amounted to €1,500. It was a fixed premium invariant to any other kinds of conditions for the new and old car than specified above. In particular there were no conditions for the new car with regard to its production country, size, weight, body style, fuel consumption and $CO_2$ emissions. The government contribution by car was only €750, the other €750 (at least) had to be funded by the industry (car makers national sales companies/importers and dealers).

**Timing**

The purchase and the registration of the new car purchased under the scheme and also the deregistration and scrapping of the old car had to be proven all together with documentary evidence at the time of application for the incentive premium. The program started on 1 April 2009 and was supposed to end either upon exploitation of its budget or on 31 December 2009 whichever occurs first. It actually ended by run-out of the allocated budget on 8 July 2009.

**Objectives**

As a result of the global economic crisis the Austrian domestic passenger car market was expected to experience a severe downturn in 2009 and 2010 and not to recover much before the expected economic rebound from 2011. At the same time the outlook for major export destinations of the small Austrian automotive industry (both car makers and suppliers) in Western and Eastern Europe was equally gloomy if not worse.

Against this background, the primary objective of the Austrian central government for the scrapping incentive scheme was to stabilize the Austrian automotive industry's domestic sales and production output. This would in turn protect jobs (in all parts of the automotive value chain) in an attempt to compensate for the expected slump in foreign demand with stronger domestic demand.

Nevertheless the incentive premium was named “Ökoprämie” (eco-premium), pointing to the expected positive ecological side effects of a parc renewal on pollutant emissions, in an attempt to gain broad political and social endorsement for the program.

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Not a priority | Not a priority |

**New Vehicles Impact**

Registrations of new cars in Austria reached 300,000 units in January–November 2009 (up by 8% y/y). According to our latest calculations, the full-year 2009 result will come out around 319,000 units—that is, approximately 50,000 units above the level that we would have expected without any stimulus in this period of economic recession. As the budget for the original scrapping scheme did not allow for more than 30,000 units of extra sales, the remaining stimulus must come from somewhere else. Apart from a likely anticipation effect from the increase of the $CO_2$-Malus on the NoVA tax from 1 January 2010, we have identified a series of industry-funded extended scrapping programs deliberately referring to the original scheme as a cause (on the sales side the industry includes wholesalers and retailers). It appears that the industry has largely turned to absorb the previous government contribution of €750 for each car with its own sales promotion budgets, in an attempt to sustain the sales momentum created by the original scheme (for example, the Ford Eco-Premium or the Mazda Eco-Plus).

We assume that the industry will carry over a good level of incentives well into 2010, with only a gradual reduction in transaction price discounts over time. In addition, like in Germany, we assume that a large portion of the extra demand created in 2009 was actually coming from typical used car buyers who would not have bought a new car if the special stimulus of the scrapping scheme had not existed. As a result, we do not expect a major payback effect from the scrapping scheme in Austria in 2010–11. However, demand for new cars is expected to fall back by approximately 14%, driven mainly by a still poor macroeconomic outlook, especially for private household disposable incomes and employment.

Besides its massive volume impact on overall new car registrations the program has also had significant structural effects on the Austrian passenger car market. As the program incentivized only private new car registrations the market was strongly biased towards private (non-corporate) new car registrations in 2009.

Another important structural effect is a significant shift in the vehicle segment structure. The program has benefited mainly the demand for mini, small and compact cars (A, B and C segments). Sales of compact and mid-size premium SUV have also been growing on the back of ongoing strong new model activity. Meanwhile demand for large cars (D and E segments) large SUV and MPV’s has declined sharply in the first eleven month of 2009. The massive shift in the near-term segment structure is due to two major factors. First: the scrapping incentive scheme favours demand for small cars with a low base price, because the relative price discount induced by the fixed amount of the incentive premium is higher the lower the base price, and the price elasticity of demand is higher among typical small and used car buyers. Second: the shift from business to private demand naturally goes together with a degradation of the model mix.

The segment shift is mirrored by the evolution of the brands. In 2009, the makers of low price small and economical cars have benefitted strongly from growing sales at the expense of those whose product portfolio is based on larger and more expensive cars, MPVs, and SUVs. The main profiteers of this development were the Korean, the French and the Italian car makers. In contrast, especially the German premium car makers have been hit particularly hard by the decline in business demand and for large cars and SUV.

Last but not least, all of the above has impacted strongly on the engine technology mix on the passenger market. The downsizing in vehicles was accompanied by a significant downsizing in engine displacement and power output. Most striking though was a massive distortion in the fuel type mix. The overall market shares of gasoline (petrol) and diesel powered passenger cars were reversed from 45% vs. 55% in 2008 to an average of 54% vs. 46% in the period January to November 2009. This is a result of both the vehicle (segment) downsizing and the swing from business to private demand.

All of these structural distortions are expected to be largely reversed in 2010 before a new equilibrium market structure will evolve from 2011/12 onwards. The reason is an expected decline in private demand owing to adverse income and employment conditions and the expected rebound in business demand due to an improved business climate in 2010.

**Used Vehicles Scrapped**

By definition the number of old cars being scrapped under the scheme had to be at least equal to the number of "officially" incentivized new cars sold under the scheme, i.e. approx. 30,000 units. Unfortunately, there are no detailed data available for the used cars scrapped under the scheme. We know however that the scrapped cars had to be at least 13 years old before scrapping. Against the background of the mandatory implementation times of the different stages of EURO pollutant emissions standards, this implies that 100% of the cars scrapped under the scheme were complying with only Euro 1 or worse (Euro 2 became mandatory from 1 January 1996).

**AUSTRIAN SCRAPPING SCHEME ADDITIONAL INFORMATION**

| Scheme Description | Comment |
|---|---|
| Additional Contribution – Manufacturer/ Dealer | Industry (car makers national sales companies/importers and dealers) has to contribute or at least have an incentive value (see budget explanation above) |
| **Used Vehicles Scrapped** | **Comment** |
| Used Car Sales | Used car sales moderately depressed by relative price distortion during scrapping incentive scheme for new cars (Jan -June 2009: -1%) |
| Consumer Behaviour – Changes/Trends? | - Strong Segment & Engine Downsizing<br>- Customers getting used to large price discounts |

***Notes on Austria: Special Case Adjustment**

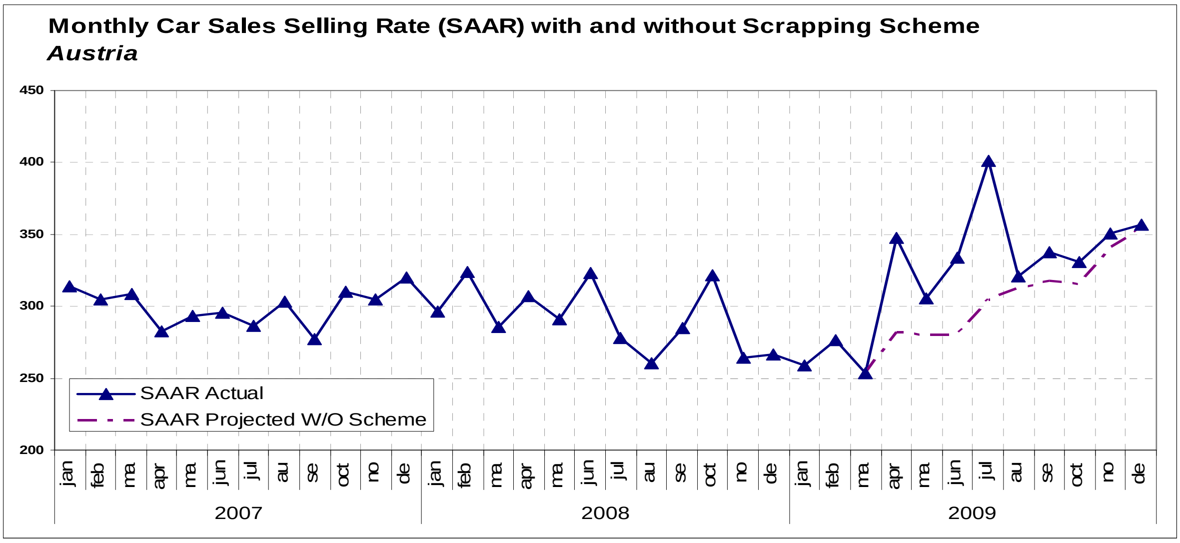
The original computations of the Austrian Scrapping Scheme included vehicles funded outside the Austrian government scheme. This is because manufacturers continued to offer 'seamless' scrapping incentives after public funding ran out. From consumers perspective the net incentive was the same and so the market continued to be stimulated for several months after the official scheme ended.

This resulted in total car sales being boosted by more than the gross level of public funding of the initial scrapping scheme. The results of this 'total impact assessment' are shown in the executive summary sections and in the EU27 aggregate tables of this report.

However we have also estimated the pure 'public funded element' of this by removing the vehicle manufacturer funded vehicles once the official scheme had been exhausted. The results of this can be found in the Austria Country Profile Annex.

Here we estimate incremental demand component to have been around 27,000 units compared to the 49,000 units in the 'total impact assessment' approach. For reference this means that using the total impact method in the main report section of this report could overstate the benefits from the scrapping schemes at the EU wide level but by no more than 1%.

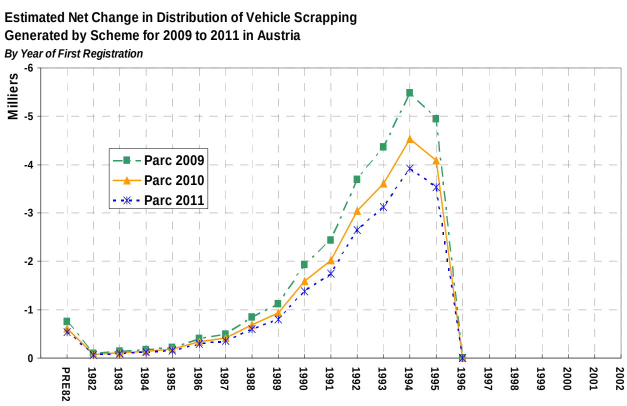
## SALES



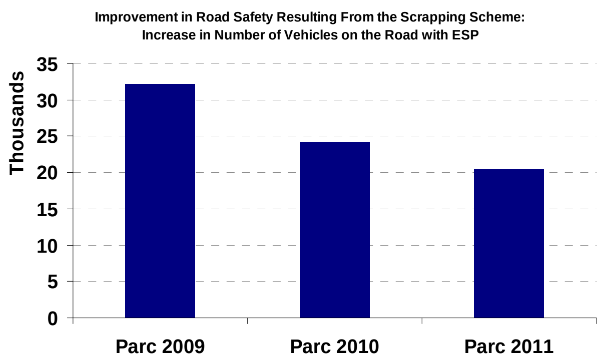

### Total Incremental Sales and Payback

| Austria | 2009 | 2010 | 2011 | Payback Rate 2010 |
|---|---|---|---|---|
| Funded Volume | 30,000 | 0 | 0 | |
| New Cars | 26,293 | -4,548 | -2,918 | -17.3% |
| **Total EU Passenger Cars** | **2,164,092** | **-417,492** | **-277,713** | **-19.3%** |
| **Total EU Light Vehicles** | **2,508,668** | **-495,266** | **-317,237** | **-19.7%** |

## PARC



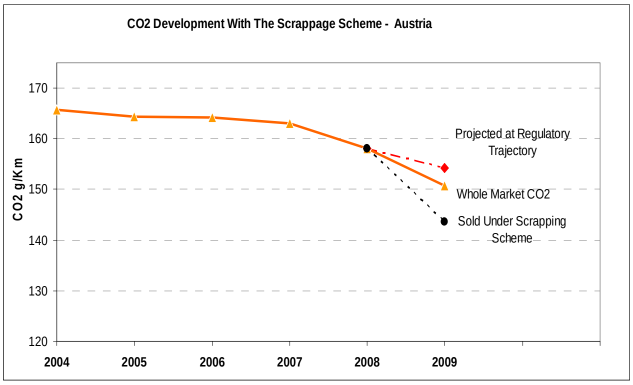

## SAFETY



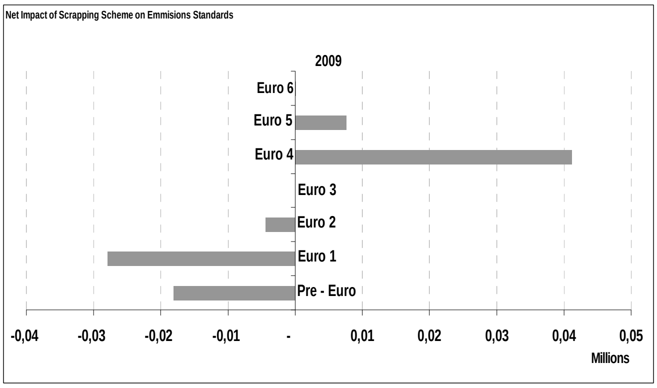
## ECONOMY

| Austria | | 2009 | 2010 | 2011 | Global Effect |
|---|---|---|---|---|---|
| Incremental value impact on public finance | M Euros | 120 | -30 | -20 | 70 |
| | | | | | |
| Incremental value on demand | M Euros | 68 | -13 | -8 | 48 |
| *NIVV produced in country* | M Euros | 0 | 0 | 0 | 0 |
| *NIVV produced outside country* | M Euros | 68 | -13 | -8 | 48 |
| | **Price Effect** | **No** | | | |
| Overall Net impact | M Euros | 188 | -43 | -28 | 118 |
| % GDP | % | 0.07% | -0.02% | -0.01% | |
| Incremental Added Value production | M Euros | 0 | 0 | 0 | 0 |
| % AV in AV auto | | 0.00% | 0.00% | 0.00% | |

### Environment – $CO_2$ Curve




### Environment – Euro Norm Impact




## ENVIRONMENT – $CO_2$ Abatement

| Austria | | | | % Contribution to Annual $CO_2$ Reduction | | |
|---|---|---|---|---|---|---|
| **$CO_2$ ABATEMENT (Tonnes $CO_2$)** | **2009** | **2010** | **2011** | **2009** | **2010** | **2011** |
| Rejuvenation Mechanism | -8,740 | -8,457 | -6,284 | 78,8% | 82,4% | 81,1% |
| Mix and Technology Mechanism | -2,346 | -1,811 | -1,467 | 21.2% | 17.6% | 18.9% |
| of which Segment Downsizing (A&B) | -2,346 | -1,811 | -1,467 | 21.2% | 17.6% | 18.9% |
| **Total $CO_2$ Reduction - Annual** | **-11,086** | **-10,268** | **-7,751** | **100.0%** | **100.0%** | **100.0%** |
| **Cumulative $CO_2$ Abatement** | **-11,086** | **-21,354** | **-29,105** | | | |

## 2 Cyprus

| | |
|---|---|
| **Description** | In 2008, the Ministry of Communication and Works of the Republic of Cyprus (Department of Road Transport) introduced the Plan for Withdrawal and Replacement of Old Cars. The aim was to promote the correct management of old cars by authorised dismantlers. This related to the withdrawal of cars over 15 years old and the provision of financial support for the replacement of old cars with new ones (if the owner wished to buy a new car).<br>Although the two plans in 2008 were successful and owners of old cars showed significant interest, only about 10% of the cars that could be properly disposed of by authorised dismantlers were actually withdrawn. Consequently, the government decided to extend the plan in 2009.<br>On 16 January 2009, the Department of Road Transport announced the application of a new Plan for Withdrawal and Replacement of Old Cars. |
| **Budget** | The scheme ended in September, after the government reached its 2009 budget of €8.5 million.<br>The two 2008 programmes combined received 13,602 applications, totalling €11.3 million in grants.<br>Overall, the scrapping schemes cost the state a total of €19.6 million. However, according to the government, the cost is considered minimal compared with the programme's benefits in terms of road safety and reduction in pollution. |
| **Incentive Value** | There are three categories of grants, but only one carries the obligation to buy a new car:<br>• Incentive of €257 for vehicles with active registration; replacement of the old car with a new one not obligatory;<br>• Incentive of €684 for vehicles with active registration and vehicle registration license valid any time during the last 12 months; replacement of the old car with a new one not obligatory;<br>• Incentives of between €1,283 and €1,710 for vehicles with active registration and vehicle registration license valid any time during the last 12 months; replacement of the old car with a new car obligatory; the new vehicle must meet special requirements relating to exhaust transmissions and fuel consumption. |
| **Timing** | The last scrapping scheme ran for only 9 months during 2009. |
| **Objectives** | Of the measures taken by other governments, the various withdrawal plans seemed to have been particularly useful, as they revived the market. Also, replacing old vehicles with new, less polluting and safer vehicles helps to protect the environment. |

| Economic | Environmental | Safety |
|---|---|---|
| Secondary | Primary | Primary |

| | |
|---|---|
| **New Vehicles Impact** | Around 2,300 new vehicles replaced old ones in 2009. |
| **Used Vehicles Scrapped** | Under the recall and replacement scheme, nearly 24,000 old cars were taken off the road between 2008 and 2009.<br>During the latest scheme (in 2009), a total of 10,039 vehicles were scrapped, 2 more units than were scrapped under the schemes that ran in 2008. |

## 3 France

**Description**

In December 2007, France implemented a brand-new $CO_2$ taxation system attached to the purchase of new cars. The amount depended on the car's level of emissions. A buyer would receive a bonus for a car that emitted less than 131g/km or be subject to a malus for a car that emitted above 160g/km. Between those two thresholds, the effect on price was nil. A scrapping incentive was also available alongside this bonus/malus measure. When purchasing a car that qualified for a bonus or was in a neutral $CO_2$ band, a buyer could receive an extra €300 bonus, provided he or she traded in an old car (more than 15 years old).

The whole bonus/malus and scrapping incentive measure was aimed at favouring more ecological buying behaviour by customers by increasing their awareness of the environmental effects of their consumption. This is one of many measures that are commonly referred to as "mesures du Grenelle de l'Environnement" (an array of green taxation measures). Undoubtedly, the economic effect was also targeted even if was not communicated.

For 2009, the scrapping incentive was substantially improved and was more clearly promoted as an economic stimulation tool. The programme was implemented on 4 December 2008, with immediate effect. It was announced that it would end on 31 December 2009.

The programme was tied to the following conditions:

- The beneficiaries of the programme were private persons and companies. Public administrations were excluded.
- The buyer of the new car and the owner of the scrapped old car had to be identical.
- The incentive scheme applied to passenger cars and light commercial vehicles.
- The new car purchased had to be new and had to emit up to 160g/km; that is, in the neutral or bonus band under the bonus/malus scheme.
- The purchase of a new LCV was not linked to any $CO_2$ constraint.
- The purchased vehicle was to be invoiced up to 31 December 2009. In December, an emergency decree was passed to extend the incentive to vehicles ordered up to 31 December 2009 (and invoiced up to 31 March 2010).
- The traded-in car or LCV must be older than 10 years, registered in France, and insured and owned by the buyer for at least 6 months. It also had to be in working condition.

**Note:** In December 2009, French officials confirmed that the scrapping scheme was to be extended for 2010. Conditions would remain identical (scrapping a vehicle over 10 years old and purchasing a new one that is eligible for a bonus or is neutral in terms of $CO_2$ taxation). However, the incentive would decrease gradually: to €700 until the end of June 2010 then to €500 until the end of December 2010. The main objective is to maintain the sales momentum and provide a smoother way out of the scheme (and hence limit the payback effect).

**Budget**

When launched, the scrapping measure was backed with an announced budget of €220 million. In June 2009, €175 million had already been engaged, according to the Ministry of Industry. As a positive sign for customers, it has been explained that the State would grant all "scrapping incentives". This indicates that the figure of €220 million was an assessment and reaching that would not mean the end of the measure. By the end of August 2009, the government communicated that €390 million was engaged. On 23 December 2009, the figure reached €575 million, with a forecast (and certainly rounded) €600 million for the whole year.

**Incentive Value**

The value of the incentive paid for each vehicle under the scrapping scheme amounts to €1,000. It was a fixed premium, without conditions (for the new and old car) other than those specified above. In particular, there were no conditions for the new car in relation to its production country, size, weight, body style, or fuel consumption.

It must be noted that the scrapping measure was often accompanied by a bonus. Indeed, the scrapping incentive was all the more interesting since the buyer could cumulate it with a bonus (€700 for a car rated between 101g/km and 120g/km, and €1,000 for a car rated under 101g/km). The trend towards low-emitting cars, which the bonus/malus system triggered in 2008, was certainly stimulated and multiplied by the scrapping incentive during 2009.

**Timing**

The scrapping incentive of €1,000 was announced and effective from 5 December 2008. It lasted until 31 December 2009.

The invoice date was the deciding factor in the purchase of a car or an LCV. The vehicle had to be invoiced until 31 December 2009 to qualify for the incentive. However, in late December, to accommodate OEMs, dealers and customers (and to prevent some bitterness and its effect on opinion polls), it was granted that the defining date would become the order date. Consequently, the scrapping incentive would remain at €1,000 for all vehicles ordered until 31 December 2009 and invoiced up to 31 March 2010.

The effective scrapping of the traded-in vehicle must take place up to 6 months after the invoice date of the purchased vehicle. Given the amount of vehicles involved and the existing bottlenecks in the scrap yards, it was decided to extend this period to 1 year.

**Objectives**

The scrapping incentive introduced in 2007 was focused mainly on the environmental effects (vehicles more than 15 years old) and reiterating the "green" argument that went with the introduction of the bonus/malus system.

The scrapping incentive of €1,000 was more pragmatically touted as a bespoke measure to cope with the worsening of the economic situation. The environmental effect was clearly relegated to second position. The influence on the composition of the parc (on its safety, for instance) has never been highlighted as a major element by officials.

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Secondary | Not a priority |

**New Vehicles Impact**

With 2.268 million units sold in 2009, the French car market has reached its highest level since 1990. The explanation lies essentially in the combined effect of the bonus/malus and scrapping incentive systems.

In 2008, the French market had already outperformed most European markets, thanks to the newly implemented bonus/malus system and a limited scrapping incentive (€300). It succeeded in remaining stable at around 2 million units. In the meantime, the whole segmentation of the car market was affected, showing an immediate and nearly brutal switch towards fuel-efficient models (as per the new $CO_2$ taxation).

Indeed, in 2007, cars emitting up to 130g/km (thus eligible for a bonus in 2008 and 2009) represented 30.4% of total sales. In 2008, their share rose to 44.8% under the sole influence of the bonus. In 2009, that share should increase to 55.5% as the scrapping incentive of €1,000 is more than double the average bonus premium.

However, the share of cars emitting more than 250g/km (and thus subject to a malus) nosedived: from 24.3% in 2007 to 13.9% in 2008. In 2009, those "gas guzzlers" should represent barely 9.3% of overall sales.

The bonus/malus system had clearly changed the rules of the game in 2008. Those new rules were still applicable to 2009 but they were certainly stimulated further by the improved scrapping incentive. As a piece of evidence, the share of cars emitting between 101g/km and 120g/km (eligible for a bonus of €700) is by far the most important: 20% of sales in 2007 compared with 47% in 2009 (35% in 2008). This $CO_2$ bracket is indeed the most attractive as there are plenty of models available at a reasonable cost (models rated under 100g/km are still mainly technologyloaded versions that come as a special edition). This, in addition to the scrapping incentive, represents a substantial discount: around 16–20% alone on a typical A-segment or B-segment car. It is worth noting that during the last couple of months of 2009, this $CO_2$ band registered the most spectacular growth rates: up by 71% in November and up by 80% in December. This shows how much customers rushed into the showrooms in the second part of 2009, to be certain of benefiting from all the available incentives (bonus and scrapping scheme).

Segmentation itself was obviously altered by the scrapping incentive. In a logical and parallel movement with the $CO_2$ ratings, the French market has seen a strong slide towards smaller segments. A-segment cars (which accounted for 7% of car sales in 2007) should more than double their share to 15.2% in 2009. This follows an already impressive boost to 9.8% in 2008. In comparison, growth in the B segment is less striking but no less effective in terms of sheer volumes: in 2009, B-segment cars should represent some 35.5% of the market compared with 31.9% in 2007 (34.7% in 2008). Those two segments are the obvious beneficiaries of the increased scrapping incentive in 2009 as they contain most of the models that are eligible for both the bonus and the scrapping incentives, thus transforming them into very attractive bargains. It is clear that C-segment cars are less affected: core versions (in terms of sales) benefit from the valuable bonus but the initial pricing position makes them less appealing. The same reasoning applies to larger segments, with even more cruel consequences (as the malus adds an extra disadvantage). In these cases, the individual effect of the scrapping measure is certainly negligible.

In terms of fuel split, France has seen diesel becoming the leading force since the early 2000s. In 2008, diesel represented nearly 78% of car sales (compared with 40% in 1998). The influence of the bonus/malus was undeniable as the new taxation system is based only on $CO_2$ emissions, thus directly promoting diesel engines.

Nonetheless, in 2009, petrol regained some allure, as it was certainly under the indirect influence of the scrapping measure. Indeed, the scrapping incentive is very attractive in relation to smaller cars: it alone represents some 10% over a typical A-segment car. Also, in this lower end of the market, petrol engines are still clearly very competitive compared with their diesel counterparts, not only in terms of emissions but also, and above all, in terms of cost. This explains why petrol engines had managed to come back to account for nearly 30% of total car sales by November 2009.

**Used Vehicles Scrapped**

Official communications indicate that around 600,000 vehicles would be scrapped under the current scheme in 2009. As there is no detailed data available, we rely on market observation, press information, and personal research to characterize the typology of these scrapped cars.

It seems that many of the scrapped cars date back to the late 1980s or early 1990s, and these include a large number of city cars (such as the R5, Twingo, 206, and 106). However, cars in the larger segments are not uncommon (such as the 405 or the first-generation Laguna)

Various sources indicate that a fair portion of scrapped cars are worth more than the €1,000 incentive on the used car market. Indeed, many of those cars are around 13–15 years old, and could be sold in the used car market for around €2,000. It is commonly thought that people took advantage of the scheme to easily sell old cars without having to deal with the effort involved in selling (such as advertising, technical certification, and time spent) and potential problems (such as costly legally required repairs). Dealers also often noted that they traded in "exotic" or "uncommon" models: those that would have more naturally been sold through private channels, as dealers never offer interesting conditions on these (marginal models or brands, notoriously unreliable and thus costly models, or variants.

**Related Data**

The main direct effect of the scrapping measure was experienced on the used car market. In 2009, demand in the used car market decreased by 2.8%. The only category of used cars that managed to grow was the one that included vehicles aged between 1 and 5 years (up by 3.2%).

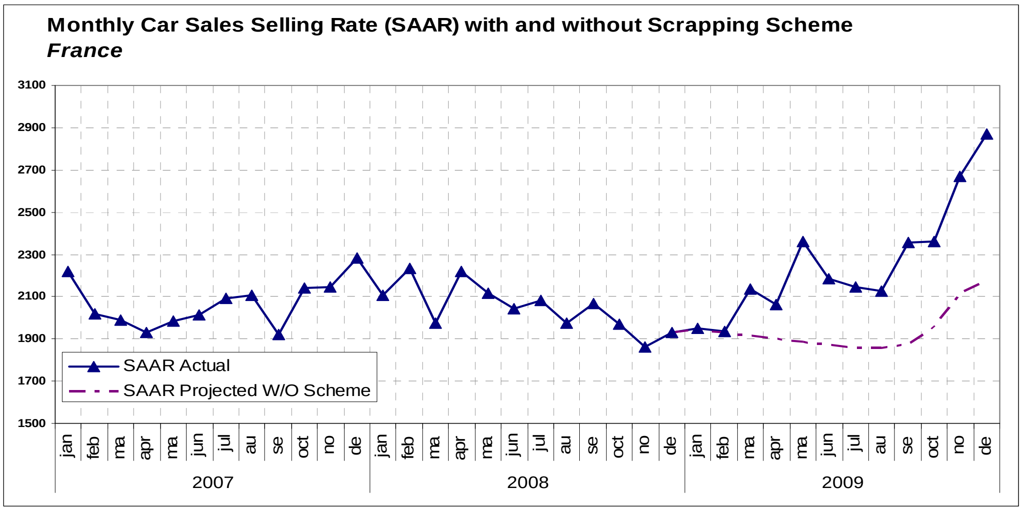
Nearly new used cars (those less than 1 year old) were particularly affected (down by 13.1%), as the conjunction of the bonus and the scrapping incentives had substantially lowered the entry price to the new car market. On many occasions, a new model was cheaper than the exact same model that was just a few months old and had nearly no kilometres on the odometer. Demand for used cars aged over 5 years declined by 4.2%: these are typically the used cars that are traded mostly between private persons, outside the OEM dealer networks.

There is plenty of anecdotal and non-official information about some hiccups that are affecting the scrapping measure. Mainly, there are reports of some grey areas that indicate that some scrapped vehicles have not been scrapped at all. For instance, some were exported to North Africa and East European countries, while others were put back into the used car market. It is said that the introduction of a (largely computerised) new system of registration in 2009 has led to the existence of these grey areas.

**FRENCH SCRAPPING SCHEME ADDITIONAL INFORMATION**

| Scheme Description | Comment |
|---|---|
| Links if any to other government schemes | No (but as bonus from Ecotax starts at 130 g/km (125 from 2010 this can be considered as a complementary incentive) |
| **New Vehicles Registered** | **Comment** |
| Fuel Type | Petrol and diesel but some boost for petrol thanks to the scheme+bonus effect (smaller cars and engines) |
| **Used Vehicles Scrapped** | **Comment** |
| Age (Averages at least) of Scrapped Vehicles | Certainly around 10/15 years<br>Surprisingly, lots of those trade-ins (around 50% from own survey) are vehicles that are worth >€1,000 on the Used Car market |
| Used Car Sales | -4.3% until September 2009 with main decline for <1year-used cars (-10%) |
| Consumer Behaviour – Changes/Trends? | Already very price sensitive, even more so now<br>+ real interest (even if not a majority) for green consideration |

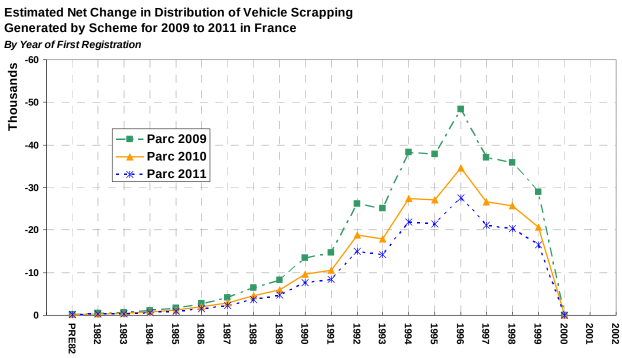
## SALES



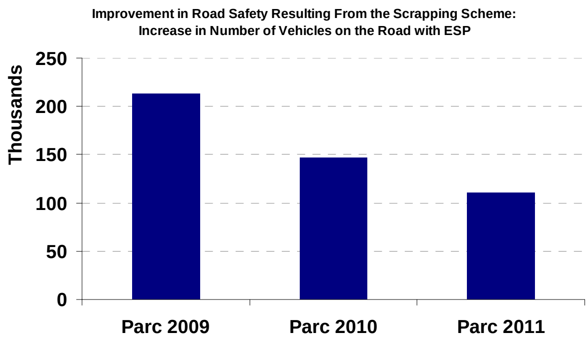

### Total Incremental Sales and Payback

| France | 2009 | 2010 | 2011 | Payback Rate 2010 |
|---|---|---|---|---|
| Funded Volume | 600,000 | 0 | 0 | |
| New Cars | 331,019 | -94,009 | -48,660 | -28.4% |
| **Total EU Passenger Cars** | **2,164,092** | **-417,492** | **-277,713** | **-19.3%** |
| **Total EU Light Vehicles** | **2,508,668** | **-495,266** | **-317,237** | **-19.7%** |

## PARC



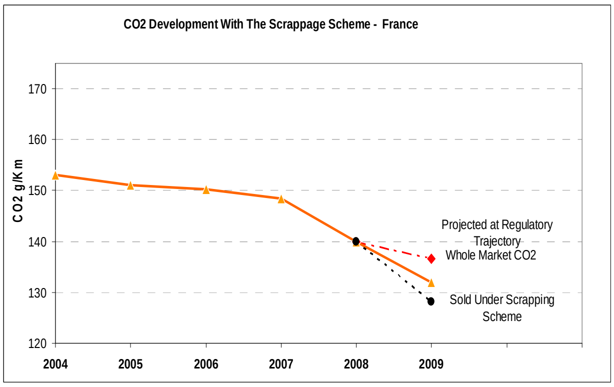

## SAFETY



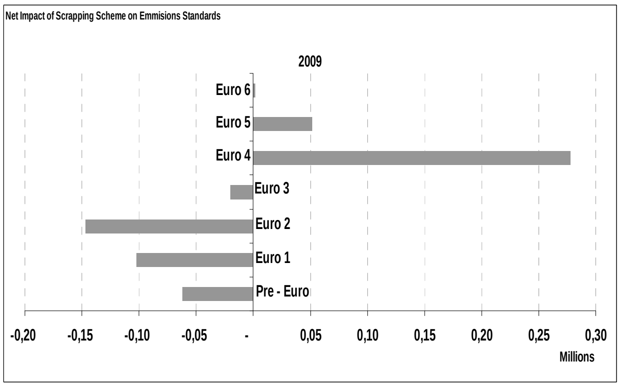
## ECONOMY

| France | | 2009 | 2010 | 2011 | Global Effect |
|---|---|---|---|---|---|
| Incremental value impact on public finance | M Euros | 170 | -220 | -110 | -160 |
| Incremental value on demand | M Euros | 1,680 | -510 | -280 | 890 |
| *NIVV produced in country* | M Euros | 1,380 | -420 | -230 | 730 |
| *NIVV produced outside country* | M Euros | 300 | -90 | -50 | 160 |
| | **Price Effect** | **Medium** | | | |
| Overall Net impact | M Euros | 1,850 | -730 | -390 | 730 |
| % GDP | % | 0.10% | -0.04% | -0.02% | |
| Incremental Added Value Production | M Euros | 90 | -60 | -40 | -10 |
| % AV in AV auto | | 0.98% | -0.63% | -0.40% | |

### Environment – $CO_2$ Curve




### Environment – Euro Norm Impact




## ENVIRONMENT – $CO_2$ Abatement

| France | | | | % Contribution to Annual $CO_2$ Reduction | | |
|---|---|---|---|---|---|---|
| **$CO_2$ ABATEMENT (Tonnes $CO_2$)** | **2009** | **2010** | **2011** | **2009** | **2010** | **2011** |
| Rejuvenation Mechanism | -111,772 | -62,252 | -33,457 | 79.5% | 73.9% | 64.4% |
| Mix and Technology Mechanism | -28,863 | -21,957 | -18,482 | 20.5% | 26.1% | 35.6% |
| of which Segment Downsizing (A&B) | -32,860 | -24,997 | -20,908 | 23.4% | 29.7% | 40.3% |
| **Total $CO_2$ Reduction - Annual** | **-140,635** | **-84,208** | **-51,939** | **100.0%** | **100.0%** | **100.0%** |
| **Cumulative $CO_2$ Abatement** | **-140,635** | **-224,843** | **-276,782** | | | |

## 4 Germany

**Description**

In 2009, the German central government has launched a scrapping incentive scheme for private new and young used car replacement purchases in 2009 to stimulate domestic demand and thereby stabilize the German automotive industry's production output and jobs. The program was implemented in mid-January 2009 and ended in early September 2009 when its budget was finally exhausted. However, its positive impact on new car registrations is likely to continue until the end of 2009 as many incentivized new cars have yet to be delivered.

The program was tied to the following conditions:

- The beneficiaries of the program had to be natural (private) persons: any kind of corporate bodies were not supposed to benefit from the scheme
- The buyer of the new and the owner of the scrapped old car had to be identical
- The incentive scheme was limited to the passenger cars sector (vehicle registration class M1); any kind of commercial vehicle sales have not been incentivized
- The new car purchased must be either all new, i.e. a new (first) registration or a so-called "JAHRESWAGEN", i.e. max. 14 months old with specified pre-ownership in Germany. In both cases the car has to be registered to the applicant in Germany and comply with Euro 4 emissions norms (which is mandatory for all new car registrations in the EU since 2006) or better
- The old car had to be scrapped with documented evidence and had to be at least 9 years old before scrapping (latest by 31 December 2009, i.e. first registration no later than 31 December 2000) and registered to the applicant without cease for minimum one year before 31 December 2009
- Finally the timing for purchase, application, registration and scrapping was conditional as outlined below.

**Budget**

Originally the budget for the program was limited to €1.5 billion, equivalent to 600,000 potential premium payments. Owing to its instant success and the risk of running out of budget before the middle of the year, the budget was increased from €1.5 billion to €5.0 billion in early April. The new budget was enough for approximately two million incentivized new and used car sales. Also, from April, the application procedure was changed to online instead of by post.

**Incentive Value**

The value of the incentive paid per car under the scrapping scheme amounts to €2,500. It was a fixed premium invariant to any other kinds of conditions for the new and old car than specified above. In particular there were no conditions for the new car with regard to its production country, size, weight, body style, fuel consumption and $CO_2$ emissions.

**Timing**

Originally the purchase and the registration of the new/used car purchased under the scheme and also the deregistration and scrapping of the old car had to all be proven together with documentary evidence at the time of application for the incentive premium. The program started on 14 January 2009 and was supposed to end either upon exploitation of its budget or on 31 December 2009 whichever occurs first. The very stringent approach to timing conditions proved to be a bit impractical, especially for sales of very popular new cars with delivery lead times. As a result, the timing requirements for the new/used car purchase and the incentive premium application on the one hand, and the new/used car registration and the old car scrapping on the other, were separated and ultimately set as follows:

| Item | Start Date | End Date |
|---|---|---|
| New/Used Car Purchase &Incentive Premium Application | 14-Jan-2009 | 31-Dec-2009 |
| New/Used Car Registration & Scrapping of Old Cars | 14-Jan-2009 | 30-Jun-2010 |

**Objectives**

As a result of the global economic crisis the German domestic passenger car market was expected to experience a severe downturn in 2009 and 2010 and not to recover much before the expected economic rebound from 2011, thus falling sharply below the 3 million unit threshold in both years for the first time since German re-unification in 1990. At the same time the outlook for car demand in major export destinations of the German automotive industry in North America, Western and Eastern Europe was equally gloomy if not worse.

Against this background the primary objective of the German central government for the scrapping incentive scheme was to stabilize the German automotive industry's domestic production output and to protect its jobs in an attempt to compensate the expected slump in foreign demand with stronger domestic demand until export markets would begin to rebound from 2010 onwards.

Nevertheless the incentive premium was named "Umweltprämie" (eco-premium), pointing to the expected positive ecological side effects of a parc renewal on pollutant emissions, in an attempt to gain broad political and social endorsement for the program.

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Not a priority | Not a priority |

**New Vehicles Impact**

In the last quarter of 2008, both domestic order intakes and new registrations for passenger cars in Germany have slumped by 29% year-on-year (y/y) and 11% y/y respectively. Due to the launch of the scrapping incentive scheme in mid-January 2009 this negative development was turned around sharply with domestic new car order intakes and registrations growing strongly by 36% y/y and 25% y/y in the period January to November 2009.

Although monthly data on the new cars registered under the scheme are currently unavailable, the split of new registrations by type of owner provides a clear indication for the magnitude of the impact of this measure on total new car registrations in 2009. While private new car registrations have more than doubled in a year-on-year comparison during the period January to September 2009 to 1,926,442 units (+101% y/y), corporate new car registrations have slumped by approx. 25% to only 1,064,324 units, owing to an adverse macroeconomic environment and a deeply depressed business climate. Moreover, according to data released in an interim report by the "Bundesamt für Wirtschaft und Ausfuhrkontrolle" (BAFA) — the government authority responsible for the administration of the scheme— in mid-December, approx. 1.3 out of 2 million premium applications submitted for new car and "Jahreswagen" purchases have been approved until early November; among those approx. 1 million for new cars (78%) and 290,000 "Jahreswagen" (22%). These numbers indicate that the year-on-year increase of 717,135 units in overall new car registrations in the period January to December 2009 is purely attributable to private demand and that the strong rise in private demand is largely attributable to cars sold under the scrapping scheme.

Although, upon exploitation of the budget for the scrapping incentive scheme, private new car demand has already begun to slump sharply as indicated by the dynamics of the industry's seasonally adjusted incoming orders in September (-3% y/y), October (-13% y/y) and November (-13% y/y). The record high level of order stocks built up during the program has kept new registrations growing until the end of the year, taking the full year result for 2009 to approx. 3.81 million new registrations. Against this background IHS Global Insight estimates the program to have generated a positive volume effect on new registrations in Germany of approx. +1.14 million cars that would otherwise not have been bought in the economic crisis year 2009. We estimate about 37% of this to be pulled forward from planned purchases in 2010 and 2011/12, thus creating an equivalent negative payback effect in those years.

Besides its massive volume impact on overall new car registrations the program has also had significant structural effects on the German passenger car market. The first and most obvious has already been touched on above. As the program incentivized only private new registrations the distribution of private and corporate (non-private) new registrations was turned upside down from 40% vs. 60% in 2008 to 64% vs. 36% in the period January to October 2009.

Another important structural effect is a significant shift in the vehicle segment structure. The program has benefited mainly the demand for mini and small cars (A and B segments). Sales of compact cars (C segment) and their SUV and MPV derivatives have been growing as well, but largely on par with the total market, while demand for large cars (D and E segments) and SUV/MPVs has declined sharply in the first eleven month of 2009. The massive shift in the near-term segment structure is due to two major factors. First: the scrapping incentive scheme favours demand for small cars with a low base price, because the relative price discount induced by the fixed amount of the incentive premium is higher the lower the base price, and the price elasticity of demand is higher among typical small and used car buyers. Second: the shift from business to private demand naturally goes together with a degradation of the model mix.

The segment shift is mirrored by the evolution of the brands. In 2009, the makers of low price small and economical cars have benefitted strongly from growing sales at the expense of those whose product portfolio is based on larger and more expensive cars, MPVs, and SUVs. Naturally, this has induced a significant increase in the share of imported passenger cars as the majority of small and economical cars either comes from foreign car makers or is simply not manufactured in Germany. The main profiteers of this development were the Korean, the French and the Italian car makers. In contrast, especially the German premium car makers have been hit particularly hard by the decline in business demand.

Last but not least all of the above has impacted strongly on the engine technology mix on the passenger market. The downsizing in vehicles was accompanied by a significant downsizing in engine displacement and power output. Most striking though was a massive distortion in the fuel type mix. The overall market shares of gasoline (petrol) and diesel powered passenger cars were reversed from 56% vs. 44% in 2008 to an average of 69% vs. 31% in the period January to November 2009. While the share of diesel remained largely stable within the corporate sector (around 54%), it has declined sharply in the private sector (from 28% in 2008 to just 16.6% in the period January to October 2009). This in combination with the massive swing from business to private demand is responsible for the sharp deterioration in the overall diesel share.

All of these structural distortions are expected to be reversed sharply in 2010 before a new equilibrium market structure will evolve from 2011/12 onwards. The reason is an expected sharp decline in private demand owing to adverse income and employment conditions in combination with the expected payback effect from the scrapping scheme, and the expected rebound in business demand due to an improved business climate in 2010.

**Used Vehicles Scrapped**

By definition the number of old cars being scrapped under the scheme will have to be at least equal to the number of incentivized new cars and “Jahreswagen” sold under the scheme, i.e. approx. 2 million units. According to the above mentioned data from BAFA the average age of the old cars scrapped under the scheme so far (as of 29 October 2009 based on ca. 1.3 million approved premium applications) is 14.2 years and the median age is 13.3 years. Considering the mandatory implementation times of the different stages of Euro pollutant emissions standards, the available data show that about 98% of the cars scrapped under the scheme were complying with only Euro 2 or worse and more than half of them were even Euro 1 or worse. With regard to the kind of cars scrapped other data from BAFA indicate that the number of new cars from foreign car makers sold under the scrapping scheme is significantly higher than their number of scrapped old ones. This confirms the observations from the sharply increased import share in the new car market and its effect on the car parc structure.

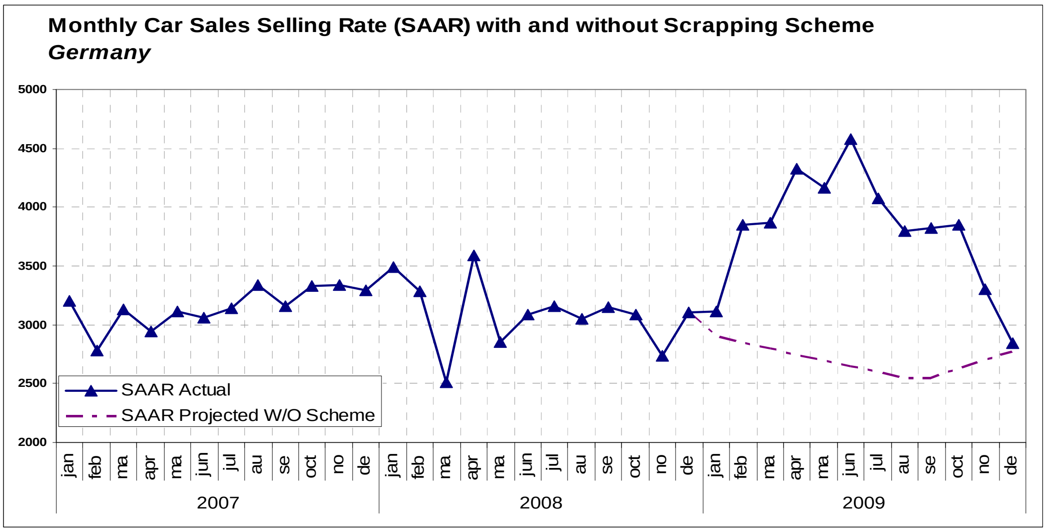
**Related Data**

In the beginning the sales of young used cars under 14 month of age were pushed up strongly by the program. Over time the stock of these cars quickly disappeared, resulting in zero stock available for sale. This has prompted quite a few car dealers to import such cars from neighbouring countries to re-fill their “Jahreswagen” pipelines.

### German Scrapping Scheme Additional Information

| Scheme Description | Comment |
|---|---|
| Additional Contribution – Manufacturer/ Dealer | Approx. €2,000 on average (NOT mandatory) |
| Links if any to other government schemes | Yes Tax rebate if new vehicle is Euro 5 or Euro 6 |
| **New Vehicles Registered** | **Comment** |
| Fuel Type | approx. 90% petrol / 10% diesel (Incentivized Private New Regs only) |
| $CO_2$ band or g/km(where available) | Average $CO_2$ emissions:<br>- Total New Car Regs (2009/1-8): 154.5 g/km<br>- Incentivized Private New Car Regs: 142 g/km (IFEU estimate) |
| **Used Vehicles Scrapped** | **Comment** |
| Age (Averages at least) of Scrapped Vehicles | average as 12 Aug-09 (682,961 applications) = 14.4 years old<br>More information from "BAFA-Zwischenbilanz_Umweltprämie_2009-08-24.pdf" |
| Used Car sales | Approx. 460,000 young used cars registered under the scheme<br>-> estimated incremental volume: 320.000 units<br>Demand for older used cars strongly depressed due to relative price distortion |
| Consumer Behaviour – Changes/Trends? | - Strong Segment & Engine Downsizing<br>- Customers getting used to large price discounts |
| Method of purchase e.g. using Finance, if available | Approx. 70% of all new car purchases depend on financing and leasing |

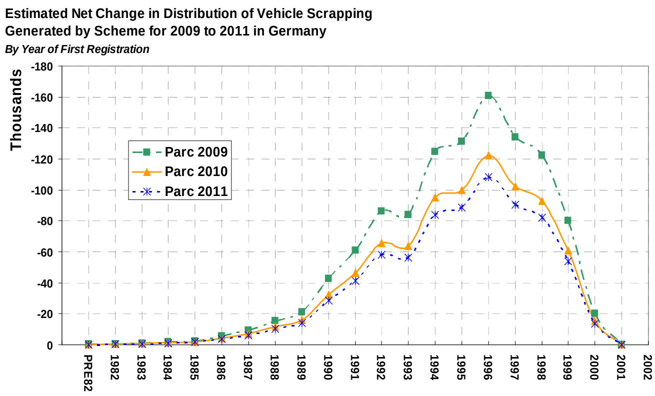
## SALES



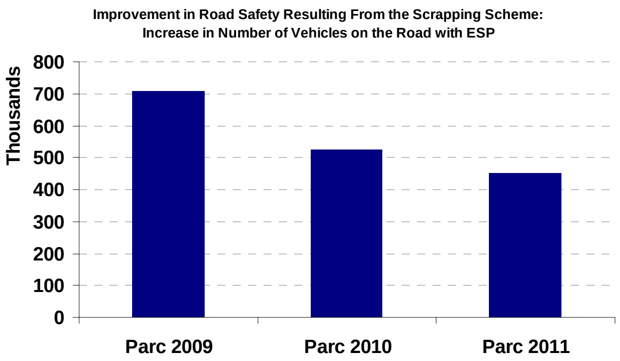

### Total Incremental Sales and Payback

| Germany | 2009 | 2010 | 2011 | Payback Rate 2010 |
|---|---|---|---|---|
| Funded Volume | 2,000,000 | 0 | 0 | |
| New Cars | 1,104,686 | -263,657 | -97,873 | -23.9% |
| Used Jahreswagen | 320,000 | -80,193 | -31,186 | -25.1% |
| **Total EU Passenger Cars** | **2,164,092** | **-417,492** | **-277,713** | **-19.3%** |
| **Total EU Used Passenger Cars** | **344,575** | **-77,777** | **-39,524** | **-22.6%** |
| **Total EU Light Vehicles** | **2,508,668** | **-495,266** | **-317,237** | **-19.7%** |

## PARC



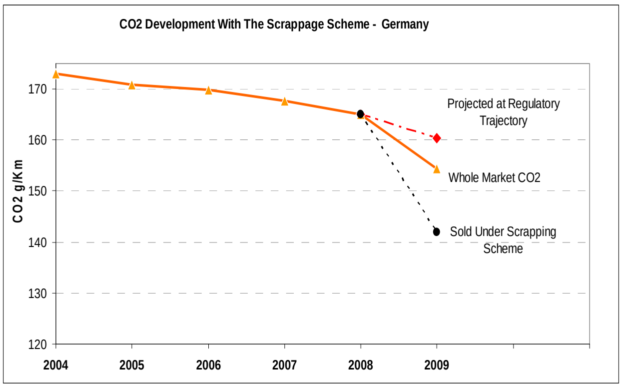

## SAFETY



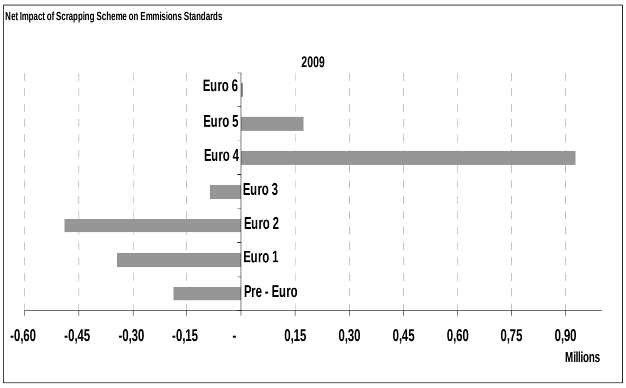
## ECONOMY

| Germany | | 2009 | 2010 | 2011 | Global Effect |
|---|---|---|---|---|---|
| Incremental value impact on public finance | M Euros | -1,070 | -670 | -240 | -1,980 |
| Incremental value on demand | M Euros | 4,600 | -1,600 | -500 | 2,500 |
| *NIVV produced in country* | M Euros | 3,700 | -1,300 | -400 | 2,000 |
| *NIVV produced outside country* | M Euros | 900 | -300 | -100 | 500 |
| | **Price Effect** | **High** | | | |
| Overall Net impact | M Euros | 3,530 | -2,270 | -740 | 520 |
| % GDP | % | 0.15% | -0.10% | -0.03% | |
| Incremental Added Value production | M Euros | 660 | -330 | -100 | 230 |
| % AV in AV auto | | 1.22% | -0.58% | -0.17% | |

### Environment – $CO_2$ Curve




### Environment – Euro Norm Impact




## ENVIRONMENT – $CO_2$ Abatement

| Germany | | | | % Contribution to Annual $CO_2$ Reduction | | |
|---|---|---|---|---|---|---|
| $CO_2$ ABATEMENT ( Tonnes $CO_2$) | **2009** | **2010** | **2011** | **2009** | **2010** | **2011** |
| Rejuvenation Mechanism | -327,020 | -193,439 | -120,867 | 60.5% | 55.1% | 46.8% |
| Mix and Technology Mechanism | -213,799 | -157,764 | -137,316 | 39.5% | 44.9% | 53.2% |
| of which Segment Downsizing (A&B) | -207,934 | -153,436 | -133,057 | 38.4% | 43.7% | 51.5% |
| **Total $CO_2$ Reduction - Annual** | **-540,819** | **-351,203** | **-258,183** | **100.0%** | **100.0%** | **100.0%** |
| **Cumulative $CO_2$ Abatement** | **-540,819** | **-892,021** | **-1,150,204** | | | |

## 5 Greece

**Description**

The Greek government introduced a very short lived scrapping incentive program which lasted for little more than a month, after it was cancelled by the new government after its election on 4 October. The scheme provided incentives when scrapping Euro 3 and older cars, relative to the engine displacement. An incentive for purchasers of new cars of Euro 4 or 5, or Euro 4 compliant Used cars also existed. The incentive for scrapping a car was available without the requirement to purchase a new car at the same time.

**Budget**

No limit, but the scheme was cancelled by the newly elected government due to the burden it would place on public finances.

**Incentive Value**

The scheme made provision for an incentive of €500 to €2,200 depending on the vehicle's engine size when scrapping a car older than Euro 3. An additional incentive was possible if buying a new vehicle.

| Engine Displacement | Scrapped Vehicle Incentive € |
|---|---|
| Up to 900cc | 500 |
| 901 – 1400 cc | 1,000 |
| 1401 – 2000 cc | 1,500 |
| 2001 – 2400 cc | 1,800 |
| >2401 cc | 2,200 |
| **Vehicle Type** | **New Purchase Incentive €** |
| New Car Euro 4, Euro 5 or Used Car of Euro 4 | 1,000 |
| LCV <3.5t | 1,500 |

**Timing**

The Scrapping Scheme ran from 30 September 2009 until 2 November 2009. The scheme would have provided an incentive for new cars of Euro 4 or 5, or Euro 4 compliant used cars until 2012. The consumer could apply for the new purchase incentive and use it during the period to 2012.

**Objectives**

To stimulate vehicle sales and improve the environmental performance of the vehicle stock.

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Primary | Not a priority |

**New Vehicles Impact**

No official data received to date. However, information from AMVIR in January 2010 indicated that of the 123,371 passenger cars, and 14,459 LCVS that were scrapped in 2009, a total of 137,920 vehicles. Around 80% of these scrapped vehicles took place between the October and December scheme, correlating with the Scrapping incentive scheme. This would equal around 110,335 vehicles.

Circa 70% of scrapped vehicles then purchased a New vehicle, which provides an estimated 77,234 vehicles. This equates with earlier estimates of around 70,000 scrapped vehicles during 30 September and 2 November 2009.

**Used Vehicles Scrapped**

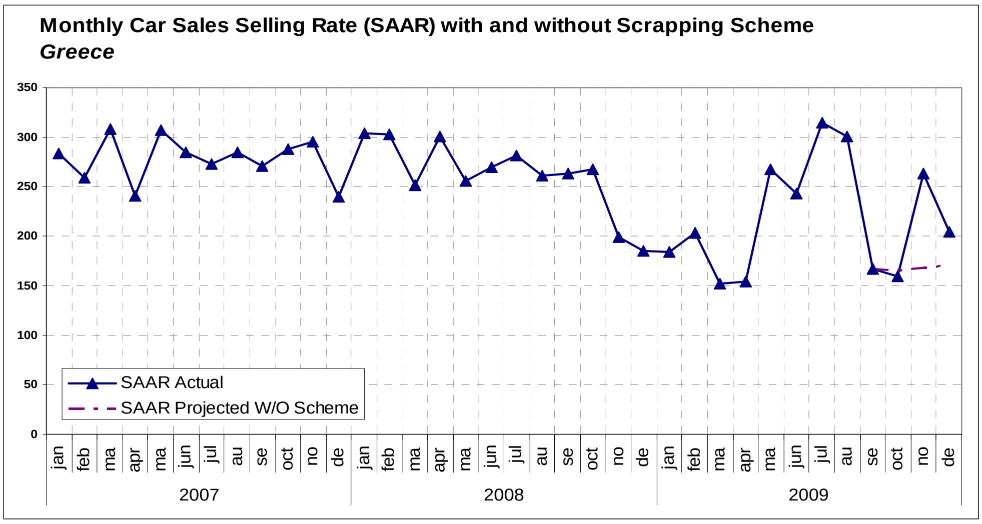
Information from AMVIR in January 2010 indicated that of the 123,371 passenger cars, and 14,549 LCV's that were scrapped in 2009, 80% of these scrapped vehicles took place between the October and December scheme, correlating with the Scrapping incentive scheme.

Circa 30% of scrapped vehicles then purchased a Used vehicle, which provides an estimated 33,100 vehicles.

**Related Data**

The government increased the Circulation Tax for 2010 which caused a considerable amount of vehicle owners to temporarily deposit their car documents and vehicle number plates with their local tax authorities so as to avoid having to pay the increased Circulation tax. This volume of vehicles has amounted to around 140,000 units. These cars are now out of circulation for 2010 but the owner could decide to reintroduce their vehicle to the parc in 2011, or decide to make the temporary deposit permanent which would in effect then convert this vehicle to a fully scrapped car. However these vehicles should not be confused with the volume of vehicles scrapped in 2009 in order to receive the Scrapping incentive.

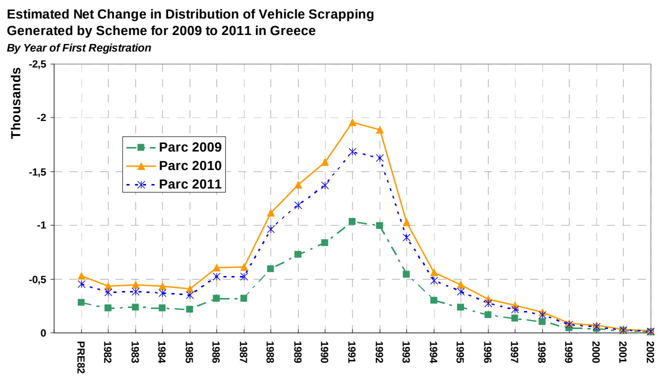
## SALES



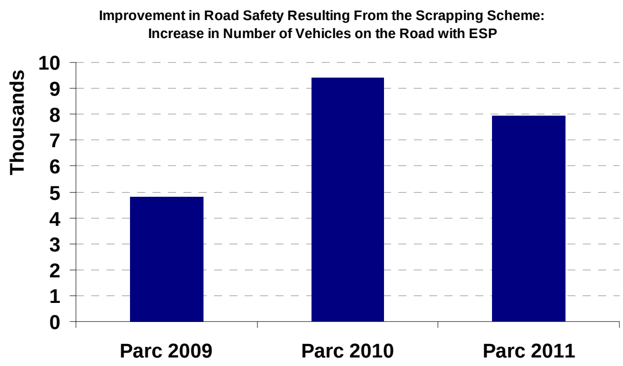

## Total Incremental Sales and Payback

| Greece | 2009 | 2010 | 2011 | Payback Rate 2010 |
|---|---|---|---|---|
| Funded Volume | 70,000 | 0 | 0 | |
| New Cars | 7,312 | 6,554 | -1,920 | 89.6% |
| Used Cars | 9,450 | -4,064 | -1,985 | -43.0% |
| **Total EU Passenger Cars** | **216,4092** | **-417,492** | **-277,713** | **-19.3%** |
| **Total EU Used Passenger Cars** | **344,575** | **-77,775** | **-39,523** | **-22.6%** |
| **Total EU Light Vehicles** | **2,508,668** | **-495,266** | **-317,237** | **-19.7%** |

## PARC



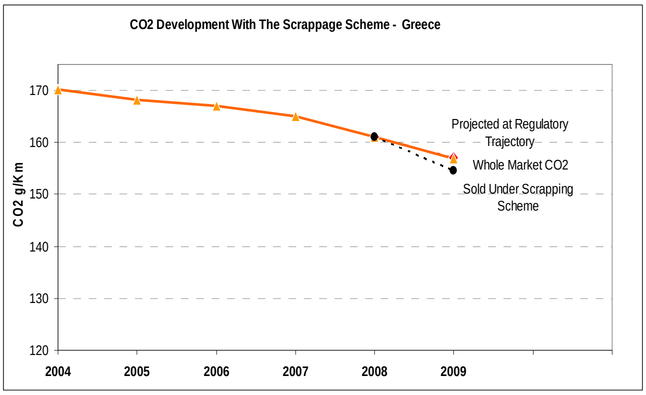

## SAFETY



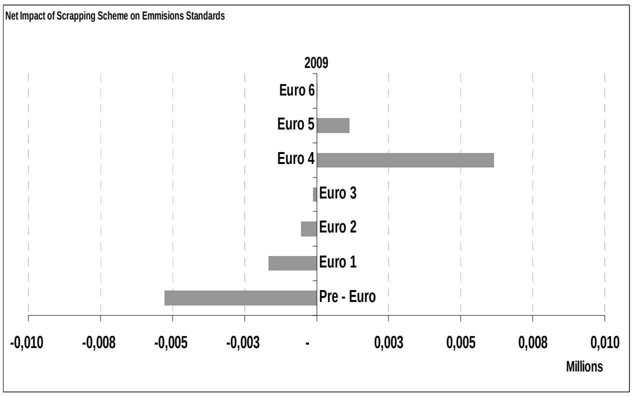
## ECONOMY

| Greece | | 2009 | 2010 | 2011 | Global Effect |
|---|---|---|---|---|---|
| Incremental value impact on public finance | M Euros | 18 | 26 | -8 | 36 |
| Incremental value on demand | M Euros | 9 | 9 | -2 | 16 |
| *NIVV produced in country* | M Euros | 0 | 0 | 0 | 0 |
| *NIVV produced outside country* | M Euros | 9 | 9 | -2 | 16 |
| | **Price Effect** | **No** | | | |
| Overall Net impact | M Euros | 27 | 35 | -10 | 52 |
| % GDP | % | 0.01% | 0.02% | 0.00% | |
| Incremental Added Value production | M Euros | 90 | -60 | -40 | -10 |
| % AV in AV auto | | 0.98% | -0.63% | -0.40% | |

### Environment – $CO_2$ Curve




### Environment – Euro Norm Impact




## ENVIRONMENT – $CO_2$ Abatement

| Greece | | | | % Contribution to Annual $CO_2$ Reduction | | |
|---|---|---|---|---|---|---|
| **$CO_2$ ABATEMENT (Tonnes $CO_2$)** | **2009** | **2010** | **2011** | **2009** | **2010** | **2011** |
| Rejuvenation Mechanism | -3,381 | -6,004 | -4,448 | 93.3% | 92.8% | 91.8% |
| Mix and Technology Mechanism | -242 | -465 | -400 | 6.7% | 7.2% | 8.2% |
| of which Segment Downsizing (A&B) | 2,873 | 5,523 | 4,754 | -79.3% | -85.4% | -98.1% |
| **Total $CO_2$ Reduction - Annual** | **-3,623** | **-6,468** | **-4,848** | **100.0%** | **100.0%** | **100.0%** |
| **Cumulative $CO_2$ Abatement** | **-3,623** | **-10,091** | **-14,939** | | | |

# 6 Ireland

| | |
|---|---|
| **Description** | The scrapping scheme provides for VRT relief when a new passenger car with $CO_2$ emissions of not more than 140g/km (i.e. $CO_2$ band A or B) is purchased and registered and another passenger car, over ten years old is scrapped. The scheme will run from 1 January 2010 to 31 December 2010. |
| **Budget** | Unknown |
| **Incentive Value** | The scheme makes provision for VRT relief of up to €1,500 applicable to new cars of emission bands A or B (i.e. with $CO_2$ emissions of 140g/km or less). |
| **Timing** | The Scrapping Scheme runs from 1 January 2010 until 31 December 2010 |
| **Objectives** | Budget 2010 saw Irish government implement a Scrapping Scheme to stimulate the 2010 motor trade. Since January 2008, the scale of the automotive downturn was such that the Irish motor industry has lost nearly a quarter of its workforce. |

**Assessment of Scheme Objective – Ireland**

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Primary | Primary |

| | |
|---|---|
| **New Vehicles Impact** | It remains too early to say as scrapping scheme only began in January 2010. |
| **Used Vehicles Scrapped** | It remains too early to say as scrapping scheme only began in January 2010. |
| **Related Data** | Scrapped cars must be 10 years or older of which there are 600,000; more than double the number applicable during the last Scrapping Scheme.<br>A previous scrapping scheme ran from July 1995 until the end of 1997, with up to 65,000 new cars sold under the scheme.<br>The existing VRT exemption for series production electric vehicles and the VRT relief of up to €2,500 for series production plug-in hybrid electric vehicles (both of which are due to expire on 31 December 2010) are being extended for two years until 31 December 2012. |

## 7 Italy

**Description**

Goal of the new – the fifth since 1997 or the third since 2007 – government incentives scrapping program is officially, and effectively, to support the Italian automotive industry both the manufacturing and distribution sectors. Indeed, the decree that the government issued on February 10, 2009 to implement its policy measure was titled "Urgent measures to support industrial sectors in crisis". The stated goal is to be achieved by providing incentives to renew both the cars and LCV's (with no more than 3.5t of GVW) fleets. The scrapped vehicles should be Euro 2 compliant or earlier and registered before 1 January 2000. The scheme does not provide incentives to purchase used vehicles. The current program – which became (retro) effective on 7 February 2009 – is similar to 2008's in that the new car must emit no more than 140 g/km of $CO_2$ (130 g/km if it has a diesel engine) while no emission limit is set for new LCV's. Yet, as far as cars are concerned it is different since incentives are made of only vouchers and no ACT (like in the 2008, but also in the 2002-3 and 2007 schemes) or registration tax exemption is provided (as in the 2002-3 program). In addition to the basic scrapping incentives the scheme also provides for bonuses to buy "greener" vehicles i.e. those "alternatively" powered (by LPG or CNG – exclusively or dually with petrol – electricity or hydrogen). Hence, these incentives can be either added to the basic scrapping voucher or received by the buyer as a stand alone incentive if no vehicle is scrapped. Note that the greener incentives represent the evolution of the ongoing three years program – which started on 1 January 2007 and will end on 31 December 2009 – to incentivize the purchasing of alternatively fuelled vehicles. Indeed, compared to the two previous years' the incentives for buying CNG fuelled vehicles were raised from €1,500/2,000 (depending on the vehicles' $CO_2$ emissions levels) to €4,000.

**Budget**

There is no budget constraint.

**Incentive Value**

**Cars:**

1. There is an incentive of €1,500
2. A further €2,000 is offered if the new car is powered by an LPG engine (exclusively or dually with petrol) that emits less than 120g/km of $CO_2$ (the incentive is €1,500 otherwise)
3. A further incentive is offered if the new car is powered by a methane (exclusively or dually with petrol), electric, or hydrogen engine. The incentive is €3,500 if it emits less than 120g/km of $CO_2$, €3,000 if it emits exactly 120g/km of $CO_2$, or €1,500 if it emits more than 120g/km of $CO_2$

**LCV's:**

a. An incentive of €2,500 applies
b. A further €2,000 is offered if the new LCV is powered by an LPG (exclusively or dually with petrol) , electric, or hydrogen engine that emits less than 120g/km of $CO_2$ (the incentive is €1,500 otherwise)
c. A further €4,000 incentive is offered if the new LCV is powered by a methane (exclusively or dually with petrol) engine.

**Timing**

The scheme is effective from 7 February to 31 December 2009. Yet, a new vehicle can be registered until 31 March 2010, provided the sales contract is signed between 7 February 2009 and 31 December 2009.

**Objectives**

Officially, and effectively, the scheme objective is economic i.e. to support the Italian automotive industry, both the manufacturing and distribution sectors. The main objective is to be achieved by providing incentives to renew both the car and LCV fleets (<3.5t of GVW). The environmental objective – which was explicitly stated in previous scrapping programs – is therefore implicitly targeted in the 2009 scheme, although the green incentives are still also included.

**Assessment of Scheme Objective - Italy**

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Primary | Not a priority |

**New Vehicles Impact**

According to a scheme interim assessment made by UNRAE – the national Foreign Auto Makers' Association – on only cars, from the beginning of the program until 31 August 2009, about 591,000 units were bought with any kind of incentive (whether an old vehicle was scrapped or not). Of these, 472,000 cars were bought upon scrapping old vehicles while 118,000 were purchased receiving only greener incentives. Of the 472,000 purchases made upon scrapping old cars, 355,000 benefited of only the basic scrapping incentives while 117,000 did so of also the greener bonuses. Of the 591,000 incentivized cars, 353,000 (60%) emit up to 120 g/km of $CO_2$, 50,000 (9%) between 120g/km and up to 130 g/km, and 158,000 (27%) between 130 g/km and up to 140 g/km. The largest share of the incentivized cars – 199,000 units or 34% – were made by Fiat, followed by Ford with 75,000 (13%) and Opel with 34,000 (6%). At model level, Fiat Panda (78,000 units or 13%) and Grande Punto (52,000 units or 9%) and Ford Fiesta (46,000 units or 8%) were the most bought cars.

**Used Vehicles Scrapped**

According to the same study, from the beginning of the program until 31 August 2009, 472,000 cars were scrapped within the scrapping scheme. Of these, 79,000 (17%) units were Euro 0 compliant, 116,000 (25%) Euro 1 compliant, and 278,000 (59%) Euro 2 compliant and registered before January 1, 2000. The largest share of the scrapped cars – 181,000 units or 38% – were made by Fiat, followed by Ford with 46,000 (10%) and Renault with 35,000 (7%). At model level Fiat Punto (64,000 units or 14%) and Panda (31,000 units or 7%) and Ford Fiesta (26,000 units or 5%) were the most scrapped cars.

**Related Data**

According to UNRAE, in the first 10 months of 2009, the $CO_2$ emissions weighted average of (total and not just incentivized) cars sales was 137.2 g/km versus 145 g/km in 2008. At segment level, as expected, lower end – notably, city cars – segments benefited the most with combined share of the city to super mini classes up by 4 points (from 53% to 57%) in the first nine months of 2009 versus 2008.

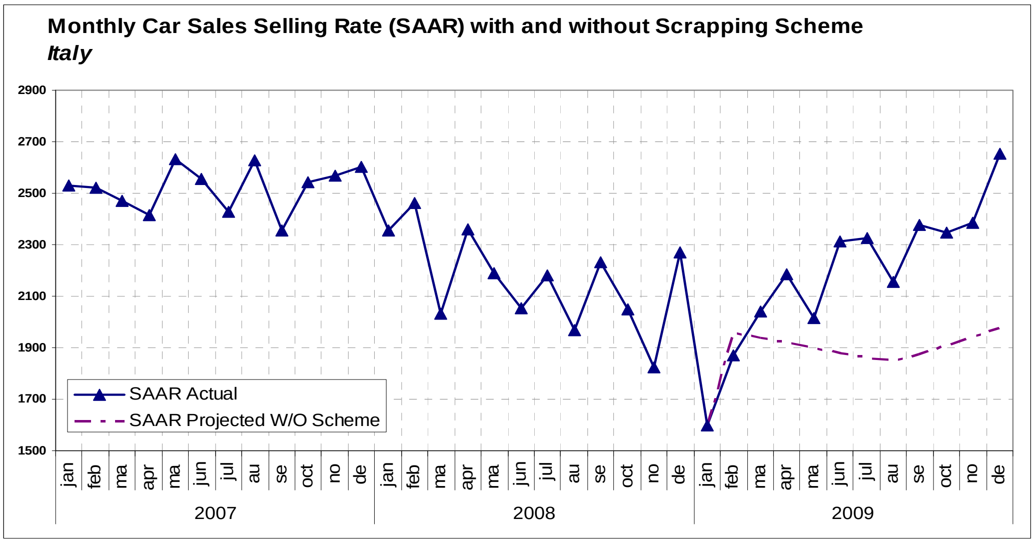
**Outlook 2010**

In 2010, a new government scrapping incentives scheme is being considered. Details are not yet known, whether old and new vehicles might participate in the program, what the bonus will be worth, what the timing would be, whether new incentives will be put in place to purchase alternatively fuelled vehicles and so on. Very likely and as in all previous schemes the program will be enacted through a decree, expected at the start of February. In the meantime and until 31 March, registrations will still benefit from the 2009 scrapping scheme on large orders book at start of 2010. On the other side new order acquisition is expected to decelerate ahead of approval of the new program. This is expected to be less generous given that the government aims to reduce the scheme's net fiscal impact as compared to last year's program. Among the options considered by the government are a shorter duration such as 6 to 8 months, a smaller cars scrapping bonus, larger incentives to scrap and/or buy LCVs (maybe in the shape of accelerated amortization schedules), lower and/or based on stricter $CO_2$ emissions incentives to purchase alternatively fuelled cars et cetera. All things being equal, we expect incentives to have a lower impact on demand for vehicles provided that a new scheme would be the fourth in a row. On top of this, sales will be negatively affected by the 2009 program.

### ITALIAN SCRAPPING SCHEME ADDITIONAL INFORMATION

| Scheme Description | Comment |
|---|---|
| Links if any to other government schemes | Several regions and counties in the Northern part of Italy - which is also the richest and with the best CNG and LPG distribution infrastructure - provide additional incentives to buy lower $CO_2$ emitting vehicles |
| Links if any to other commercial offers | Depending on OEMs marketing and sales strategies |
| **New Vehicles Registered** | **Comment** |
| Fuel Type | Only for cars (from 7 February to 31 August 2009) |
| $CO_2$ band or g/km(where available) | Only cars (from 7 February to 31 August 2009) |
| **Used Vehicles Scrapped** | **Comment** |
| Age (Averages at least) of Scrapped Vehicles | Only cars (from 7 February to 31 August 2009) until 1990 and from 1991 to 1999 |
| Used Car sales | From 1 January to 30 September 2009, 2.068 millions cars |
| Consumer Behaviour – Changes/Trends? | Consumers typically highly sensitive to incentives and biased toward small sized cars - rapidly rising shares of CNG and LPG fuelled cars |

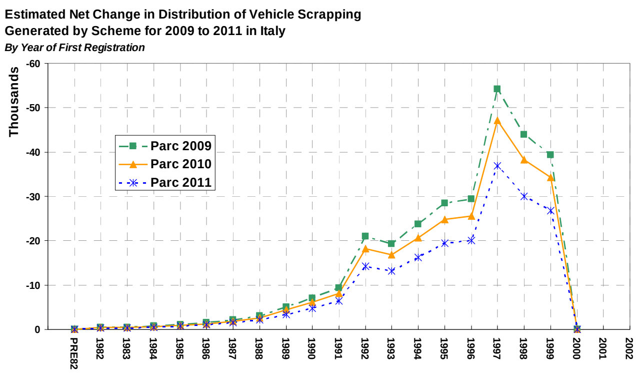
## SALES



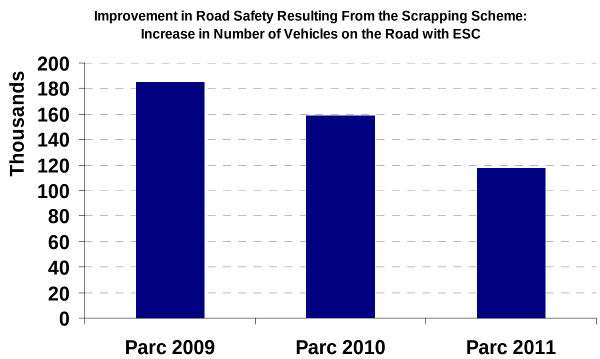

### Total Incremental Sales and Payback

| Italy | 2009 | 2010 | 2011 | Payback Rate 2010 |
|---|---|---|---|---|
| Funded Volume | 856,000 | 0 | 0 | |
| New Cars | 290,335 | -37,781 | -54,527 | -13.0% |
| **Total EU Passenger Cars** | **2,164,092** | **-417,492** | **-277,713** | **-19.3%** |
| **Total EU Light Vehicles** | **2,508,668** | **-495,266** | **-317,237** | **-19.7%** |

## PARC



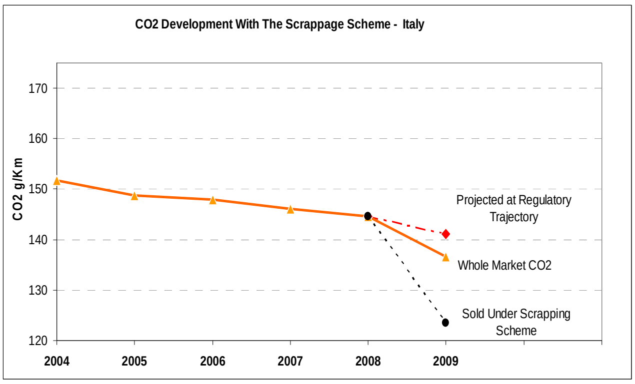

## SAFETY



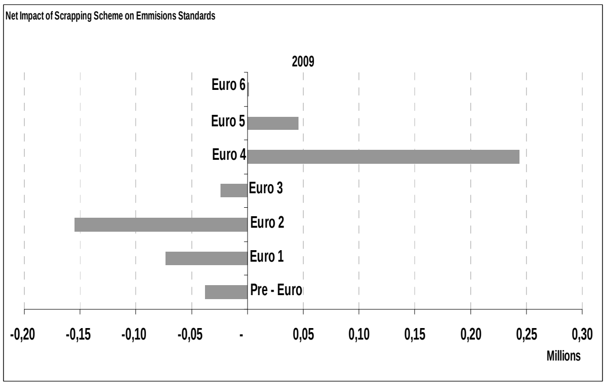
### ECONOMY

| Italy | | 2009 | 2010 | 2011 | Global Effect |
|---|---|---|---|---|---|
| Incremental value impact on public finance | M Euros | -410 | -290 | -120 | -820 |
| Incremental value on demand | M Euros | 864 | -109 | -173 | 582 |
| *NIVV produced in country* | M Euros | 570 | -70 | -110 | 390 |
| *NIVV produced outside country* | M Euros | 294 | -39 | -63 | 192 |
| | **Price Effect** | **High** | | | |
| Overall Net impact | M Euros | 454 | -399 | -293 | -238 |
| % GDP | % | 0.03% | -0.03% | -0.02% | |
| Incremental Added Value production | M Euros | 89 | -24 | -16 | 49 |
| % AV in AV auto | | 1.56% | -0.43% | -0.27% | |

### Environment – $CO_2$ Curve




### Environment – Euro Norm Impact




### ENVIRONMENT – $CO_2$ Abatement

| Italy | | | | % Contribution to Annual $CO_2$ Reduction | | |
|---|---|---|---|---|---|---|
| **$CO_2$ ABATEMENT (Tonnes $CO_2$)** | **2009** | **2010** | **2011** | **2009** | **2010** | **2011** |
| Rejuvenation Mechanism | -93,333 | -66,143 | -31,576 | 63.0% | 57.8% | 44.5% |
| Mix and Technology Mechanism | -54,777 | -48,298 | -39,411 | 37.0% | 42.2% | 55.5% |
| of which Segment Downsizing (A&B) | -30,972 | -27,309 | -22,175 | 20.9% | 23.9% | 31.2% |
| **Total $CO_2$ Reduction - Annual** | **-148,110** | **-114,441** | **-70,988** | **100.0%** | **100.0%** | **100.0%** |
| **Cumulative $CO_2$ Abatement** | **-148,110** | **-262,550** | **-333,538** | | | |

## 8 Luxembourg

**Description**

On 1 January 2009, the government introduced a scrapping incentive called "CAR-e plus". Natural persons and private corporations are eligible when they withdraw from circulation a car that is at least 10 years old and purchase a new vehicle with a low level of $CO_2$ emissions at the same time.

At the end of November, the scheme was extended until 31 July 2010, with the same conditions.

The new car must be registered in Luxembourg in the name of the applicant within 7 months of applying for the incentive. If the car is leased (without a driver), this deadline is extended to 12 months. Application must be made by 1 October 2011 at the latest (1 March 2012 for leased cars).

There are four conditions:

1. The old car, which was registered in Luxembourg, must be destroyed through an authorised firm, which can deliver a certificate of destruction (this must be presented with the application).
2. The scrapped vehicle must be at least 10 years old (calculated from the date shown on the certificate of registration).
3. The owner of the old vehicle (as shown on the certificate of registration) during the continuous period of 12 months before it is scrapped and the purchaser of the new car with low $CO_2$ emissions must be the same.
4. The owner must have held valid insurance for the old car for at least 6 months during the 12 months prior to destruction.

**Budget**

The estimated budget for the scheme (which ran from 1 January 2009 to 31 December 2009) was €10 million.

**Incentive Value**

The scrapping bonus is €1,750 if the $CO_2$ emissions of the new car purchased do not exceed 120g/km. It falls to €1,500 for cars whose emissions are between 121g/km and 150g/km (160g/km for cars with more than 6 seats, cars adapted for disabled use, or electric, hybrid or GLP cars).

For diesel cars, the CAR-e plus is not granted if the emissions of fine particles are lower than or equal to 5mg/km. A particulate filter would then be required.

**Timing**

The scrapping scheme has been extended until July 2010. It will thus last for 19 months, allowing for an extra 7 months to account for the delay required before a scrapping subsidy can be submitted.

**Objectives**

The scrapping scheme in Luxembourg is part of a series of measures decided by the government. It is motivated mainly by ecological considerations:

- The system of financial support to promote cars with low carbon emissions has been extended. The grant of €750 for natural persons towards the purchase of a car with $CO_2$ emissions of less than 120g/km, which came into effect 1 January 2008, was extended to private corporations on 1 January 2009. A grant of €750 has also been available since 1 January this year for the purchase of a car with $CO_2$ emissions not exceeding 160g/km if the vehicle is registered in the name of a disabled person. The cost to the Luxembourg state is estimated at €4.5 million for 2009.
- The introduction of grants for the promotion of domestic refrigeration appliances with low energy consumption (A++).
- Adaptation of systems of grants introduced in connection with rational energy use and the promotion of renewable energy in buildings.

Besides environmental benefits, this measure will also, according to government, support the automotive industry, which is heavily affected by the repercussions of the financial and economic crisis in nearby countries.

| Economic | Environmental | Safety |
|---|---|---|
| Secondary | Primary: the government targets vehicle fleet performance | Not a priority |

**New Vehicles Impact**

For full-year 2009, the government calculates that 6,000 vehicles were scrapped and sold as new.

In the first quarter of 2009, the green measures tended to increase the share of cars with low emissions in new registrations (up by 21.9% for new cars with $CO_2$ emissions of less than 120g/km in 2009, compared with 17.9% in 2007 and 9.2% in 2005).

### Luxembourg Scrapping Scheme Additional Information

| Scheme Description | Comment |
|---|---|
| Links if any to other government schemes | Car-e of €750 if cars < 120g/km (160 g under condition) |
| **New Vehicles Registered** | |
| $CO_2$ band or g/km(where available) | +21,9% new cars with < 120g $CO_2$ in 2009 |

# 9 The Netherlands

**Description**

In April 2009, the Dutch Ministry of Environment announced that a scrapping programme was to be implemented from May to promote the replacement of old and polluting vehicles by greener vehicles. As such, the Dutch measure is original when compared with most of the other European schemes. It does not focus mainly on the purchase of new vehicles but on the replacement of old cars.

The programme was tied to the following conditions:

- The beneficiaries of the programme are private persons and companies.
- The buyer of the newer vehicle and the owner of the scrapped old car have to be identical.
- The incentive scheme is available for passenger cars and light commercial vehicles.
- The newer purchased vehicle has to be built after 1 January 2001 if it is a petrol car or LCV. If it is a diesel vehicle, it has to be equipped with a DPF (factory equipment).
- The scrapped vehicle must be more than 9 years old. Various conditions apply to the scrapped vehicle and so the incentive varies (see the *Incentive Value* section below).
- The traded-in car or LCV must have been registered by the buyer for at least one year. It also has to be in working condition: the APK (technical certification) must be valid for at least 3 months.

Note: The municipalities of Amsterdam (in July 2009) and The Hague also implemented scrapping measures at a local level (extra incentives range from €250 to €1,000).

**Budget**

The scrapping measure was launched in May 2009 with an announced budget of €85 million from the state, €10 million from local authorities, and a reported €30 million from the automotive sector.

**Timing**

The scrapping measure was officially introduced in April 2009 and became effective on 29 May 2009.

It is expected to end in 2010, as the announcement stated that it would end as soon as the budget was exhausted.

**Objectives**

The Dutch scrapping measure, which was launched under Ministry of Environment guidance, focuses on environmental concerns (improved air quality).

As a symbol, the measure is not limited to the purchase of new vehicles. In a wider context, it promotes the replacement of old vehicles by newer and cleaner ones, thus confirming its primary green objective.

| Economic | Environmental | Safety |
|---|---|---|
| Secondary | Primary | Not a priority |

**New Vehicles Impact**

With 387,699 units sold in 2009, the Dutch car market decreased by 22.5% compared with the figure in 2008. As the scrapping measure did not focus entirely on new vehicles, the intent was not to prevent the collapse of the new car market. Nonetheless, it has certainly helped to smooth out the trough.

As of January 2010, only 27% of the vehicles purchased under this scheme were brand new. The majority were used vehicles (73%). Cars accounted for 99% of the vehicles purchased, while LCV's accounted for just 1%.

The brands that have benefited the most from the measure are Peugeot (the 107 reached fourth position in terms of sales of new cars), Ford, Opel, Renault, and Fiat.

The fuel breakdown of the newly purchased vehicles is 95% petrol, 3% diesel, and 2% LPG.

**Used Vehicles Scrapped**

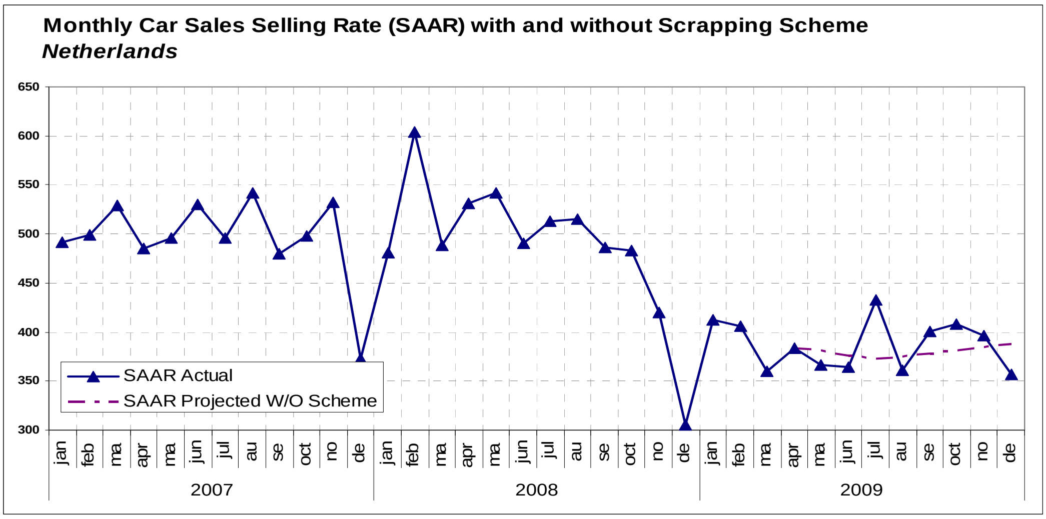
As of December 2009, a total of 50,000 scrapping transactions were registered. In early January 2010, a total of 51,700 units were counted.

Among the scrapped vehicles, 96% were cars and only 4% were LCV's. Petrol accounted for 88%, while diesel accounted for 11% and LPG for 1%. The top 5 scrapped brands were Opel, Volkswagen, Peugeot, Renault, and Ford.

**DUTCH SCRAPPING SCHEME ADDITIONAL INFORMATION**

| Scheme Description | Comment |
|---|---|
| Additional Contribution – Manufacturer/ Dealer | From Oct. 2009: Additional contribution in Amsterdam, from €250 to €1,000 or incentive is vehicle is scrapped and no other is bought (from €500 to €1,000) |
| **New Vehicles Registered** | **Comment** |
| Fuel Type | 95% petrol, 2% diesel, 2% LPG, 0,4% Hybrid/EV |

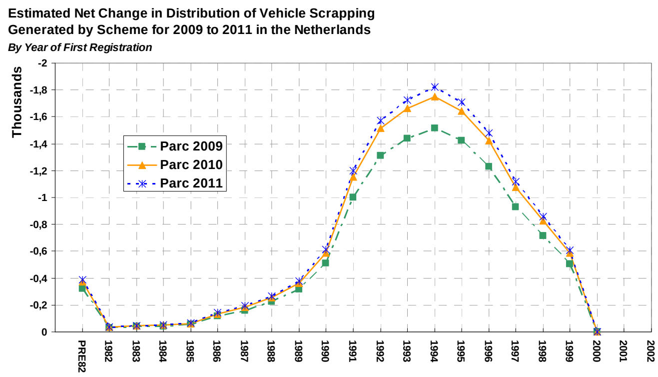
## SALES



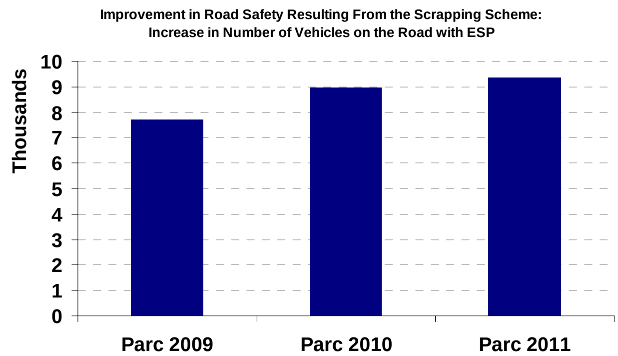

### Total Incremental Sales and Payback

| The Netherlands | 2009 | 2010 | 2011 | Payback Rate 2010 |
|---|---|---|---|---|
| Funded Volume | 56,900 | 0 | 0 | |
| New Cars | 11,878 | 1,848 | 535 | 15.6% |
| Used Cars | 15,126 | 6,482 | -6,353 | 42.9% |
| **Total EU Passenger Cars** | **2,164,092** | **-417,492** | **-277,713** | **-19.3%** |
| **Total EU Used Passenger Cars** | **344,575** | **-77,774** | **-39,523** | **-22.6%** |
| **Total EU Light Vehicles** | **2,508,668** | **-495,266** | **-317,237** | **-19.7%** |

## PARC



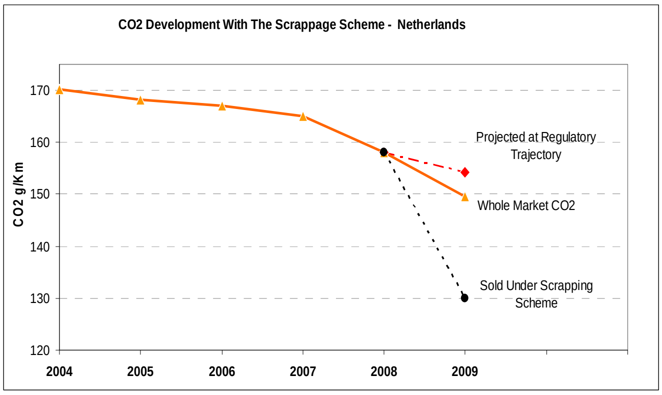

## SAFETY



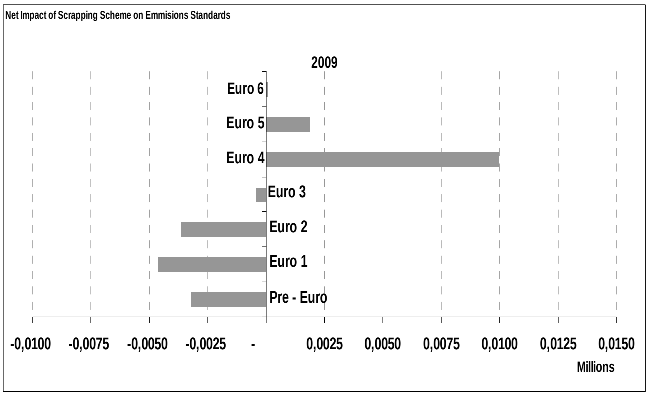
## ECONOMY

| The Netherlands | | 2009 | 2010 | 2011 | Global Effect |
|---|---|---|---|---|---|
| Incremental value impact on public finance | M Euros | 53 | 8 | 2 | 63 |
| Incremental value on demand | M Euros | 15 | 3 | 1 | 19 |
| *NIVV produced in country* | M Euros | 1 | 0 | 0 | 2 |
| *NIVV produced outside country* | M Euros | 14 | 3 | 1 | 17 |
| | **Price Effect** | **No** | | | |
| Overall Net impact | M Euros | 68 | 11 | 3 | 82 |
| % GDP | % | 0.01% | 0.00% | 0.00% | |
| Incremental Added Value production | M Euros | 0 | 0 | 0 | 0 |
| % AV in AV auto | | 0.03% | 0.00% | 0.00% | |

### Environment – $CO_2$ Curve




### Environment – Euro Norm Impact




## ENVIRONMENT – $CO_2$ Abatement

| The Netherlands | | | | % Contribution to Annual $CO_2$ Reduction | | |
|---|---|---|---|---|---|---|
| **$CO_2$ ABATEMENT (Tonnes $CO_2$)** | **2009** | **2010** | **2011** | **2009** | **2010** | **2011** |
| Rejuvenation Mechanism | -3,825 | -3,625 | -2,981 | 53.9% | 49.2% | 43.4% |
| Mix and Technology Mechanism | -3,273 | -3,748 | -3,882 | 46.1% | 50.8% | 56.6% |
| of which Segment Downsizing (A&B) | -2,836 | -3,248 | -3,373 | 40.0% | 44.0% | 49.1% |
| **Total $CO_2$ Reduction - Annual** | **-7,099** | **-7,374** | **-6,863** | **100.0%** | **100.0%** | **100.0%** |
| **Cumulative $CO_2$ Abatement** | **-7,099** | **-14,473** | **-21,336** | | | |

## 10 Portugal

**Description**

The scrapping scheme was first established in 2001 originally as an End of Life Vehicle program. In 2007, the scheme increased the incentive available for scrapping an older car. At that point the scheme started to become more successful. Then in 2009, the age thresholds were lowered to the current level which also brought more vehicles into the scheme. Finally for 2009, the scheme introduced an upper $CO_2$ threshold of 140g/km for the new car that is purchased.

**Budget**

€45 millions.

**Incentive Value**

The incentive amounts to €1,250 when scrapping a car > 8 years old or €1,500 when scrapping a car > 10 years old. The incentive is in the form of a Registration tax reduction.

**Timing**

The scheme has run yearly since 2001. From 2007 the lower value of the incentive had been in place. In 2009, the lower value of the incentive ran from 1 January to 6 August 2009 (€1,000 and €1,250)

**Objectives**

The purpose of the scheme is to rejuvenate the car parc. The addition of a $CO_2$ threshold in August 2009 makes it clear that $CO_2$ reduction is now also an objective.

| Economic | Environmental | Safety |
|---|---|---|
| Not a priority | Primary | Secondary |

**New Vehicles Impact**

During 2009 a total of 41,735 units were registered, of which 33,804 vehicles were Passenger cars, and 7931 vehicles were Light commercial vehicles.

The average weighted $CO_2$ of new passenger cars purchased under the scheme in 2009 was 126.6g/km; this was a distinct improvement from the 134.7g/km in 2008 and 135.7g/km in 2007.

**Used Vehicles Scrapped**

A total of 41735 vehicles were scrapped under the scheme. The average age of scrapped vehicles as of September 2009 according to Valorcar was 16.2 years old.

**Related Data**

Data showed the breakdown of new vehicles purchased under the scheme by make for 2009 and 2008, as well as indicating the top ten models purchased under the scrapping scheme.

**Top 10 Models Sold Under Scrapping Scheme**

| Top 10 | Make | Model | Volume |
|---|---|---|---|
| 1 | FORD | Fiesta | 3,248 |
| 2 | RENAULT | Megane II | 2,517 |
| 3 | OPEL | Corsa | 2,387 |
| 4 | PEUGEOT | 207 | 2,223 |
| 5 | RENAULT | Clio | 2,198 |
| 6 | CHEVROLET | Aveo | 1,657 |
| 7 | FIAT | Grande Punto | 1,539 |
| 8 | OPEL | Astra | 1,473 |
| 9 | SEAT | Ibiza | 1,379 |
| 10 | VOLKSWAGEN | Golf | 1,375 |

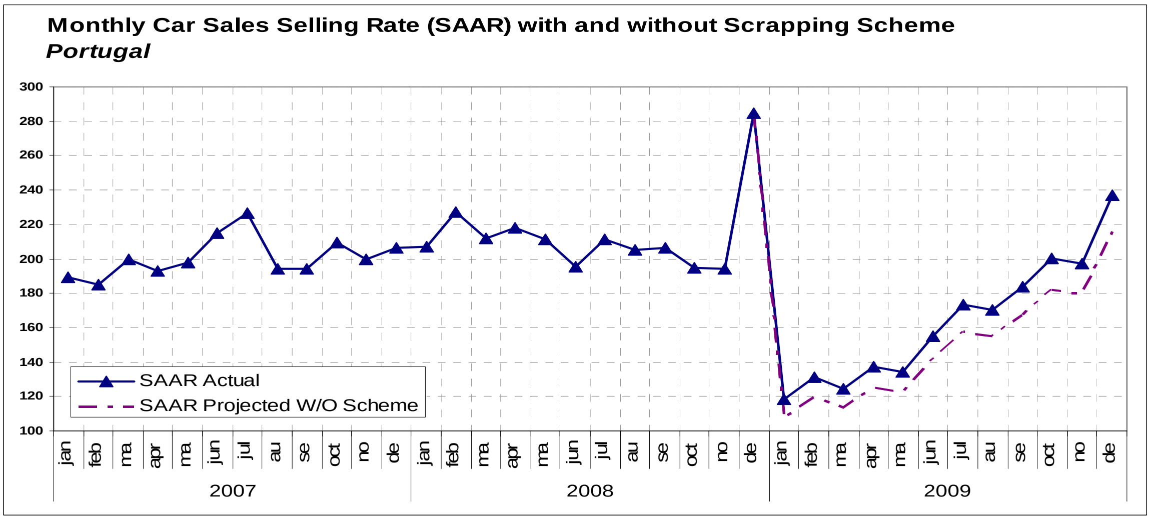
*Source: Valorcar, Portugal*

**Best Selling Makes Under Scrapping Scheme in 2009 v 2008**

| MAKES | 2008 | 2009 |
|---|---|---|
| RENAULT | 4,844 | 5,723 |
| FORD | 1,567 | 4,718 |
| OPEL | 6,489 | 4,389 |
| PEUGEOT | 3,483 | 4,319 |
| CITROEN | 3,029 | 3,136 |
| FIAT | 1,869 | 2,533 |
| VOLKSWAGEN | 2,395 | 2,498 |
| SEAT | 2,667 | 2,417 |
| TOYOTA | 1,914 | 2,201 |
| CHEVROLET | 1,141 | 1,755 |

*Source: Valorcar, Portugal*

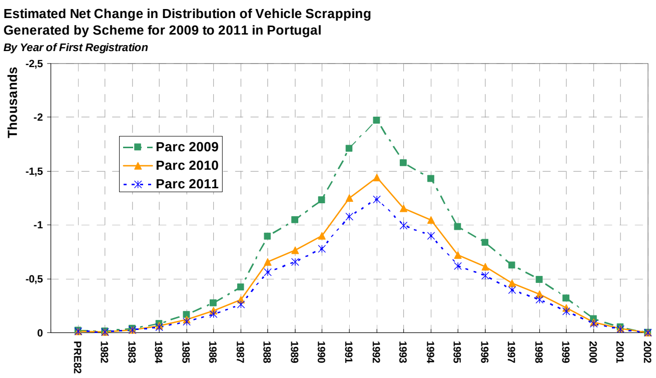
# SALES



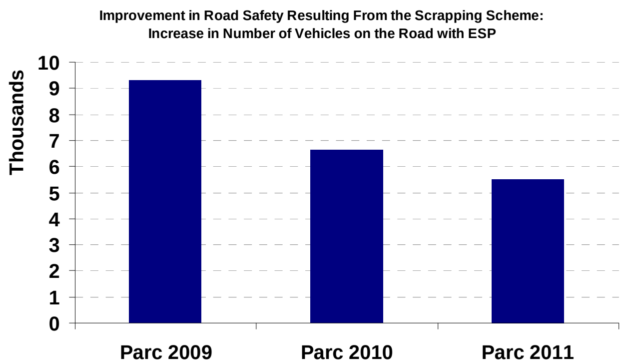

## Total Incremental Sales and Payback

| Portugal | 2009 | 2010 | 2011 | Payback Rate 2010 |
|---|---|---|---|---|
| Funded Volume | 32,500 | 0 | 0 | |
| New Cars | 14,297 | -3,817 | -1,473 | -26.7% |
| **Total EU Passenger Cars** | **2,164,092** | **-417,492** | **-277,713** | **-19.3%** |
| **Total EU Light Vehicles** | **2,508,668** | **-495,266** | **-317,237** | **-19.7%** |

## PARC



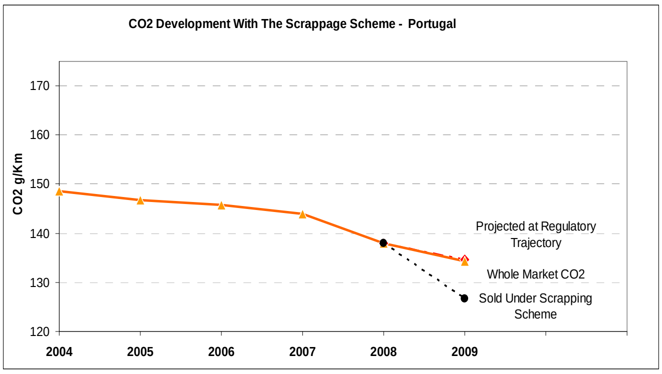

## SAFETY



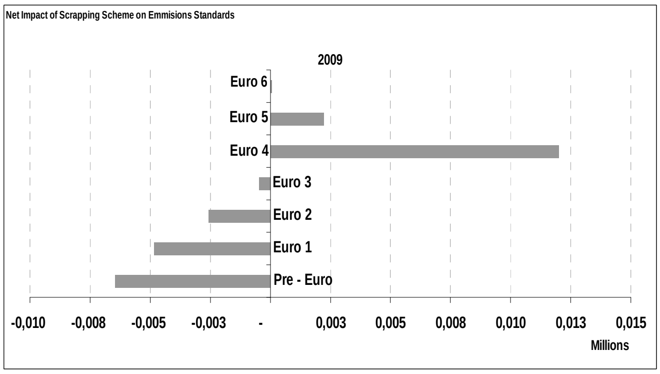
## ECONOMY

| Portugal | | 2009 | 2010 | 2011 | Global Effect |
|---|---|---|---|---|---|
| Incremental value impact on public finance | M Euros | 23 | -18 | -7 | -2 |
| Incremental value on demand | M Euros | 19 | -6 | -2 | 12 |
| *NIVV produced in country* | M Euros | 0 | 0 | 0 | 0 |
| *NIVV produced outside country* | M Euros | 19 | -6 | -2 | 12 |
| | **Price Effect** | **Medium** | | | |
| Overall Net impact | M Euros | 42 | -24 | -9 | 10 |
| % GDP | % | 0.03% | -0.02% | -0.01% | |
| Incremental Added Value production | M Euros | 0 | 0 | 0 | 0 |
| % AV in AV auto | | 0.00% | 0.00% | 0.00% | |

### Environment – $CO_2$ Curve




### Environment – Euro Norm Impact




## ENVIRONMENT – $CO_2$ Abatement

| Portugal | | | | % Contribution to Annual $CO_2$ Reduction | | |
|---|---|---|---|---|---|---|
| **$CO_2$ ABATEMENT (Tonnes $CO_2$)** | **2009** | **2010** | **2011** | **2009** | **2010** | **2011** |
| Rejuvenation Mechanism | -6,861 | -4,326 | -3,092 | 79.9% | 77.0% | 73.4% |
| Mix and Technology Mechanism | -1,727 | -1,295 | -1,121 | 20.1% | 23.0% | 26.6% |
| of which Segment Downsizing (A&B) | -173 | -130 | -112 | 2.0% | 2.3% | 2.7% |
| **Total $CO_2$ Reduction - Annual** | **-8,588** | **-5,622** | **-4,212** | **100.0%** | **100.0%** | **100.0%** |
| **Cumulative $CO_2$ Abatement** | **-8,588** | **-14,210** | **-18,422** | | | |

IHS GLOBAL INSIGHT

## 11 Romania

**Description**

Romania's scrapping scheme was not just a reaction to the economic crisis in 2009. The country had schemes in place since 2003, although terms varied slightly. They have been managed by the environmental fund administration since 2005. Those schemes helped reduce the share of cars more than 20 years old from 25% of the car parc to 6%. By the end of 2008, a total of 76,627 old cars had been scrapped.

The 2009 Rabla (as the scheme is called) was divided into three stages, with an initial target of 20,000 units each. The first stage was limited to passenger cars and the new car had to be bought with cash. Individuals could contribute only 1 car to the programme. The second stage also allowed buyers to use credit to finance the purchase or to lease the new vehicle. On 3 June, the government approved an emergency ordinance that extended the scrapping scheme, cancelling the provision that individuals could contribute only 1 car. Additionally, the scheme was opened up to include light utility vehicles up to 3.5 tonnes. These amendments came into force at the start of the third stage.

The scrapped car had to be at least 10 years old (calculated from the date of production) and still functional. It also had to be registered in Romania before 31 December 2006.

There were no conditions for the new car.

**Budget**

The initial target was to replace 60,000 vehicles, evenly divided across the three stages. Therefore, 228,000,000 lei was set aside. As progress was very slow, the target for the third stage was reduced from 20,000 units to 10,000 units. "Our allocation estimates read 60,000 units for 2009–2011 for individuals only," stated Environment Minister Nicolae Nemirschi. As only 32,327 vehicles were actually replaced, the cost to the government amounted to just 122,842,600 lei (about €30 million).

**Incentive Value**

The value of the incentive amounted to 3,800 lei (roughly €900). In previous schemes, the value was 3,000 lei. Following the depreciation of the currency, this rise was necessary to keep the incentive on the same level in terms of the euro, the currency generally used for trading in the automotive market in Romania.

**Timing**

- First stage: 20 March to 29 May
- Second stage: 1 June to 31 August
- Third stage: 1 September to 11 December

There will be a further scrapping scheme in Romania in 2010.

**Objectives**

The main objectives of the environmental fund administration that organises the Rabla were to boost the industry and to reduce pollution. "The measures…are meant to encourage the automotive industry and help us reach the targets for collecting used cars," said Nemirschi.

| Economic | Environmental | Safety |
|---|---|---|
| **Primary:** | **Primary:** | **Not a priority:** |
| Boosting the industry was a major goal of the programme. Almost half of the new cars bought under the scheme were actually locally produced Dacias. | Reducing pollution was a major goal of the programme. The old cars that were replaced were actually heavy polluters. | Safety was not mentioned as a priority by the government. Nonetheless, the scrapped cars were much more dangerous than the new ones that replaced them. |

**New Vehicles Impact**

The 2009 scrapping programme was a disappointment. Instead of the initially targeted 60,000 units, a mere 32,327 vehicles were replaced. Even though there was a rise in showroom traffic when the programme started in March, only 12,064 vehicles were scrapped in the first stage, thus missing the target of 20,000 units. The unused volume was made available in the second stage but was again not exploited. Only 9,649 orders were placed in the second stage.

Two months into the programme, only 20% of the new cars sold in Romania were traded under the scrapping scheme. This compares with only 11.5% in 2008, although market conditions were completely different then.

Dacia was in a very good position to profit from the programme. As in other European markets, the scrapping scheme favoured affordable cars (such as Dacia models). In Romania, the national brand already had a remarkable market penetration to start from. Of about 32,000 new vehicles sold under the programme, Dacia accounted for 18,153 units, while Renault sold 2,651 units, Skoda 2,249 units, Opel 1,557 units, and Chevrolet 1,475 units.

Almost all new cars were Euro 4 compliant (some were Euro 5 compliant) and almost none had $CO_2$ emissions of above 180 g/km. About a third emit less than 140g/km.

**Used Vehicles Scrapped**

A total of 32,327 old cars were replaced under the Rabla in 2009. This undershoots the initial target of 60,000 units by almost half. Meanwhile, the limited support the programme lent to the industry came at a time when Dacia was already busy trying to meet the demand triggered by the scrapping schemes in Germany and France.

The largest positive effect of the Rabla can therefore be seen in terms of the environment and safety. On average, the scrapped cars were about 20 years old, most of them Dacias (the 1300 and 1310 ranges). Those cars come from an era when little attention was given to emissions and safety. They were now mostly replaced by Euro 4 cars with an acceptable safety rating.

**Outlook 2010**

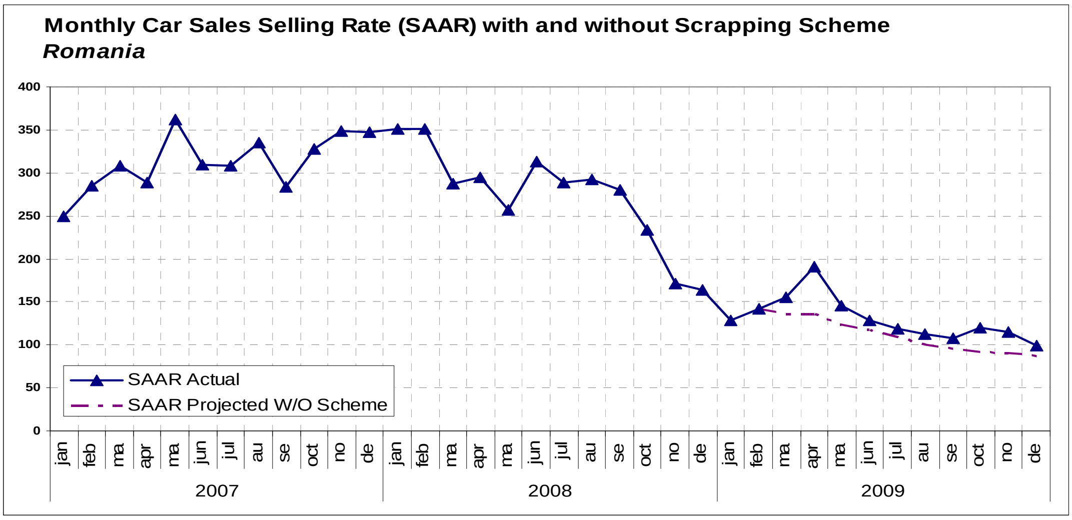
Romania had had a scrapping programme in place for many years, and is not going to change this in 2010. One day before New Year's Eve, the environment ministry announced details for this year's scrapping programme, which came into force on 1 January. This first stage will end on 25 June. This will be followed be the second and final stage, which will run from 1 August to 25 November.

As in last year's scheme, the vehicle to be scrapped has to be at least 10 years old and the incentive value for each scrapped vehicle amounts to 3,800 lei (roughly €900). The scheme is again open to private individuals as well as businesses; the new vehicle can also be financed by credit or leased.

The big novelty in this year's scheme is that the person scrapping the car does not have to be the same person who buys the new car. Vouchers with a nominal value of 3,800 lei will be given when a car is scrapped. Up to three can be combined to discount the price of the new vehicle. The authorities are even considering increasing the number of vouchers that can be combined in the case of businesses. Special, more generous, conditions apply for old tractors and farming machines.

The new conditions render the 2010 scheme much more attractive, compared with the previous one. It can therefore be expected that a much larger share of the budget allotted to the programme will be exploited this time. However, after last year's target had to be quietly revised downwards to make the outcome look a bit less disappointing, the government is now cautious about announcing targets. One possible interpretation of Nemirschi's earlier remarks is that the unused part of the earlier target of 60,000 units will be made available. This would amount to a target of 27,673 vehicles scrapped and a budget of just over 100 million lei (about €25 million). If this is the case and if three vouchers are used for every purchase, not much more than 9,000 new vehicles will be sold under the programme in 2010.

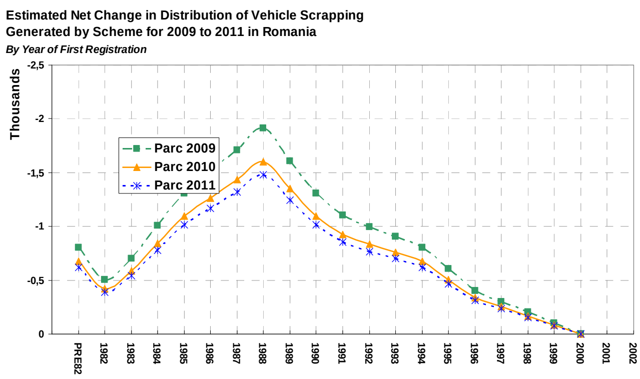
## SALES



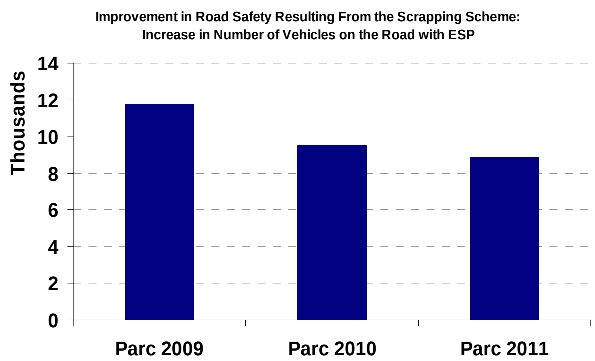

### Total Incremental Sales and Payback

| Romania | 2009 | 2010 | 2011 | Payback Rate 2010 |
|---|---|---|---|---|
| Funded Volume | 32,327 | 0 | 0 | |
| New Cars | 17,818 | -2,869 | -1,140 | -16.1% |
| **Total EU Passenger Cars** | **2,164,092** | **-417,492** | **-277,713** | **-19.3%** |
| **Total EU Light Vehicles** | **2,508,668** | **-495,266** | **-317,237** | **-19.7%** |

## PARC



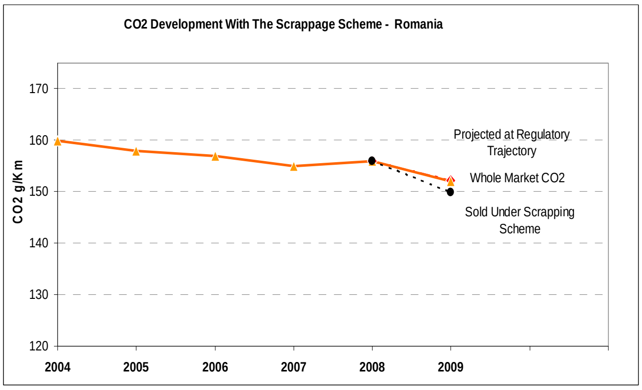

## SAFETY



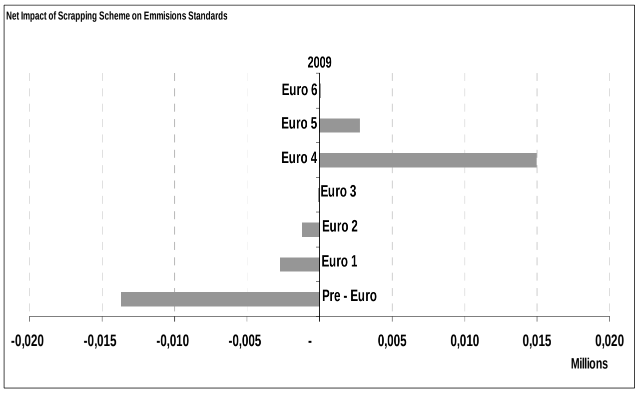
**ECONOMY**

| Romania | | 2009 | 2010 | 2011 | Global Effect |
|---|---|---|---|---|---|
| Incremental value impact on public finance | M Euros | 21 | -23 | -3 | -5 |
| Incremental value on demand | M Euros | 99 | -16 | -6 | 77 |
| *NIVV produced in country* | M Euros | 82 | -13 | -5 | 64 |
| *NIVV produced outside country* | M Euros | 17 | -3 | -1 | 13 |
| | **Price Effect** | **No** | | | |
| Overall Net impact | M Euros | 120 | -39 | -9 | 72 |
| % GDP | % | 0.13% | -0.04% | -0.01% | |
| Incremental Added Value production | M Euros | 42 | -3 | -3 | 36 |
| % AV in AV auto | | 2.51% | -0.19% | -0.17% | |

**Environment – $CO_2$ Curve**




**Environment – Euro Norm Impact**




**ENVIRONMENT – $CO_2$ Abatement**

| Romania | | | | % Contribution to Annual $CO_2$ Reduction | | |
|---|---|---|---|---|---|---|
| **$CO_2$ ABATEMENT (Tonnes $CO_2$)** | **2009** | **2010** | **2011** | **2009** | **2010** | **2011** |
| Rejuvenation Mechanism | -6,422 | -5,127 | -3,400 | 93.1% | 92.9% | 90.3% |
| Mix and Technology Mechanism | -475 | -393 | -364 | 6.9% | 7.1% | 9.7% |
| of which Segment Downsizing (A&B) | -2,296 | -1,902 | -1,767 | 33.3% | 34.5% | 46.9% |
| **Total $CO_2$ Reduction - Annual** | **-6,897** | **-5,521** | **-3,764** | **100.0%** | **100.0%** | **100.0%** |
| **Cumulative $CO_2$ Abatement** | **-6,897** | **-12,418** | **-16,182** | | | |

## 12 Slovakia

**Description**

The Slovak Government launched two scrapping schemes in March and April 2009. The schemes applied only to private and business consumers who replaced an old car (over 10 years old) and bought a new car. This applied only to cars in the M1 category and costing less than €25,000. The old vehicle scrapped had to be manufactured before 1 January 1999, been in use for the past 10 years, and registered in Slovakia before 31 December 2008.

The purchaser had to keep the new car for at least two years. However, the government has now cancelled this condition and so the owner of the new car can sell it at any time.

The last condition was that the scrapping bonuses did not apply to new cars sold through classic leasing schemes. Therefore, some leasing companies, in agreement with the government, proposed other financial products, such as loans to purchase the new car, which would allow customers to get the scrapping bonus.

The customer must hand the old vehicle over to an authorised scrap yard, which issues an official receipt. This is then submitted to the car dealer, who issues an invoice showing the discount vis-à-vis the scrap yard contribution and the price before and after the government and dealership contributions were applied. The customer does not therefore receive the subsidy directly from the government. Instead, the retailer calculates the proper discount and applies to the Ministry of Economy for reimbursement.

**Budget**

The Slovak government released €55.3 million in total for two schemes (€33.2 million in March 2009 and €22.1 million in April 2009), in an effort to assist the ailing automotive industry in Slovakia. This represented the scrapping of 44,200 vehicles.

According to the Ministry of Economy, the scheme should bring a net increase of more than €12.3 million to the state budget via VAT, registration fees, and additional state income from additional costs of car users, and the services of importers and maintenance organisations.

**Incentive Value**

Between 9 March 2009 and 25 March 2009, the basic government incentive to scrap an old vehicle was €1,000. If the dealer reduced the sale price of the new car by €500, the government increased the bonus to €1,500.

Between 9 April 2009 and 14 April 2009, the aim was to raise competition between dealerships in the country and to add more flexibility to the system. The contribution was slightly different from the first wave. This time, the dealers had to give €1,000 for each new car to entitle the buyer to qualify for the €1,000 bonus allocated by the government. There is an official bonus of up to €2,000 for each new car.

**Timing**

The first scheme, valued at €33.2 million, ran from 9 March 2009 to 25 March 2009 (13 working days).

The second scheme ran from 9 April 2009 to 14 April 2009 (5 working days). To be eligible for the bonus on the purchase of new car, the old vehicle had to be scrapped before 14 April 2009 and the certificate had to be delivered before that date.

This means that a total of 18 effective days were allowed to scrap old vehicles. The applicant has up to 7 months to buy a new car, as the certificate given when the old vehicle is scrapped can be used until 31 December 2009. Nevertheless, the new car must be ordered, delivered and registered before 31 December 2009.

**Objectives**

The Slovak automotive industry suffered a lot in the first two months of 2009, as sales of passenger cars were down by 38.5% year-on-year (y/y) and production at the three plants was plunging. Some OEMs even idled production for a couple of days at their plant in Slovakia. The automotive industry represents a significant part of the overall Slovak economy and GDP, and it has been highly supportive over the past three years. Therefore, the Slovak government decided that it could do something to avoid massive outlay, and prevent the economy from collapsing.

The result was the enforcement of the two schemes.

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Secondary | Secondary |

The primary aim of those two schemes was to help to cushion the effect of the global downturn on the local car industry and to boost confidence, while slightly increasing purchasing power in Slovakia.

The following is taken from the *Slovak Spectator* (7–13 September 2009). Since the launch of the scheme, which the government introduced in March to help the ailing Slovak car industry and to partially renew Slovakia's fleet of old cars, opinions on the real effects of the programme have been mixed. Prime Minister has admitted that Slovakia's bonus programme, initiated along with 11 other EU countries, has had a negligible impact on the country's extensive automotive industry, but he also perceives Slovakia's participation as a stance in solidarity with other countries with strong automotive industries which first launched the idea. The government sees the programme as a way to renew customer's trust and, last but not least, as a way to improve the quality of Slovakia's fleet of cars, heavily littered as it is with old and sometimes dangerous cars.

**New Vehicles Impact**

By 20 March 2009, most dealers had sold out of new small and medium-sized cars. Dealers have had to react quickly to the sudden rise in demand and OEMs needed to import more cars into the country in an unplanned short period of time. Nonetheless, some buyers of new cars have been left without a vehicle for a couple of months.

A total of 35,897 consumers benefited from the government funds in H1 2009, leaving 8,300 more cars eligible in H2 2009. This is possible because buyers had to scrap their old vehicles before 14 April 2009 but the bonus to buy a new car was valid until the end of 2009. However, in H1 2009, a total of 24,450 new cars were registered while 11,442 customers placed orders for new cars. However, the vehicles had not yet been delivered and registered.

Between March and September 2009, a total of 51,146 new cars were registered. This included 34,981 new cars registered under the two schemes (see table below).

| Month | Cars Sold Under the Scrapping Scheme | Percentage of Total Sales |
|---|---|---|
| March | 3,733 | 57.5 |
| April | 7,242 | 74.1 |
| May | 6,204 | 73.3 |
| June | 7,276 | 70.3 |
| July | 6,090 | 61.6 |
| August | 3,135 | 49.0 |
| September | 1,301 | 27.2 |
| **Total** | **34,981** | **62.3** |

*Source: ZAPSR*

As of 30 September 2009, the best-selling brands under the scheme were Renault (5,848 registered or reserved cars), Skoda (5,757 cars), Kia (3,181 cars), Peugeot (3,120 cars), and Citroen (2,302 cars). All in all, Renault sales ballooned over the period; its sales were up by 94% y/y, thanks to strong demand for its Thalia and Clio models, as well as the Megane. Meanwhile, Kia sales went up by 68.1% y/y, thanks to the Cee'd and the new Soul (launched on the Slovak market in April 2009).

The locally made Kia Cee'd and Peugeot 207 gained significant market shares. Almost 10% of the new cars purchased under the schemes were locally made. Nevertheless, most of the "luxury brands" as well as three out of four locally produced SUV's (the VW Touareg, Audi Q7, and Porsche Cayenne) have been penalised by those scrapping schemes, as most of the vehicles are priced over the bonus scheme's limit of €25,000.

Only the BMW 1-Series 116i and 118i, the Mercedes-Benz A-Class and B-Class, some versions of the Audi A3 (A3 Attraction 1.8-litre T FSI 160k 6-G or lower range models), the VW Fox, Polo, and Golf (with the exception of the Variant Sport versions), some versions of the New Beetle (below 1.8-litre and the 1.6-litre 6-AG), and the VW Scirocco 1.4-litre TSI 122k 6G models are part of the scheme, as they cost less than €25,000.

The average price of cars purchased under the schemes was around €10,500.

**Used Vehicles Scrapped**

A total of 44,200 old cars were scrapped in two rounds: 22,100 vehicles scrapped in each scheme. At the beginning of the first scheme, more than 2,000 vehicles were scrapped every day. Scrapping yards, packed with old cars, implemented waiting list fees and charged those who brought vehicles during the second scheme.

To absorb all old vehicles, the logistics of the scrapping scheme had to be increased rapidly and the government had to quickly implement coordination to increase the processing of old vehicles.

**Related Data**

As classic leasing to buy a new car was forbidden under the schemes, the leasing market shrunk by 42.7% y/y in H1 2009 in Slovakia. Sales of used vehicles are suffering a lot from the schemes.

The schemes created a bubble that will soon burst, and disturbed the passenger car market as well as the LCV market. Indeed, the schemes exacerbated the problems. Most of the new vehicles that are bought now under those schemes will not be purchased later on this year or next.

Some businesses have purchased cars in the M1 category rather than in the N1 category to benefit from the schemes because, for some models, it is more attractive to trade in an old vehicle and get the subsidy than to claim back the VAT when purchasing a new LCV. For example, a Fiat Grande Punto can be registered under the M1 category or the N1 category in Slovakia. On 18 March 2009, the normal price for this model was €8,950. Under the N1 category the customer would have bought this vehicle for €7,196 after the VAT refund. Under the M1 category it would cost €6,950 (€500 subsidy from Fiat and €1,500 from the Slovak government).

When the first scheme came into force, only Citroen and Peugeot confirmed that they would grant customers the €500 contribution from their end. However, the market reacted quickly and more car retailers and brands stepped into the scheme. Several thousand Slovaks rushed into showrooms, traded in old vehicles and bought new cars. Some brands granted an extra €500 or €1,000 to customers who bought a small or medium-sized car, such as a VW. An extra eco-bonus of €1,000 was given to anyone who purchased a Fox, Polo, Golf, Golf Plus, Golf Variant, or Jetta.

It is also important to know that a non-legal and non-recognised scheme was put in place by some dealers and sellers of or used cars. This extended the "bonus" to the purchase of cars that had less than 6,000 kilometres on the clock and that has been in service for a maximum of six months on the date of sale. In May, June, and July 2009, sales of used cars were relatively high compared with the rest of 2009.

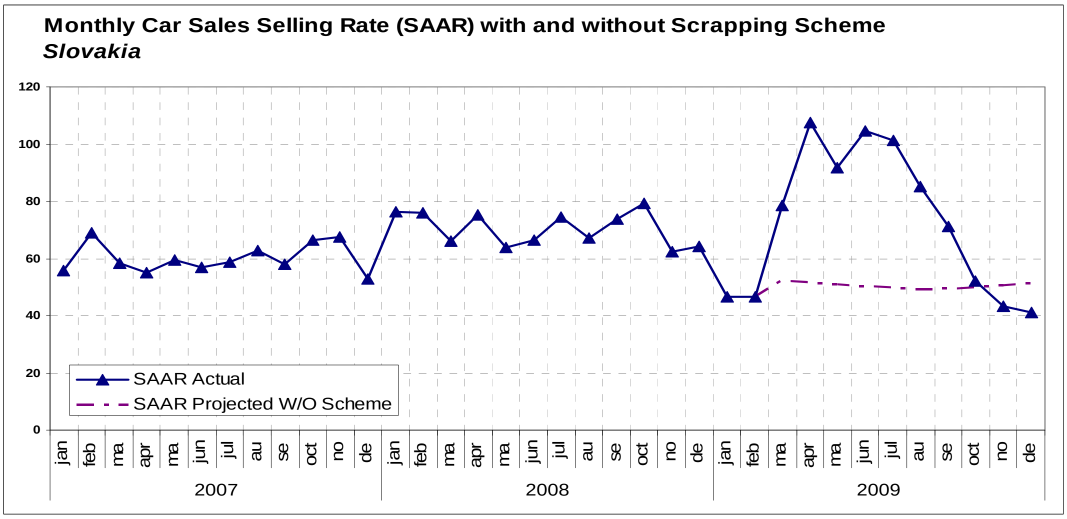
Some car dealers increased the price of new cars during the second scheme.

Nonetheless, we do not see any medium-term to long-term benefit from those subsidies, with the exception of scrapping old vehicles, inventory destocking, and faster renewal of the parc. This has environmental and safety implications. A new scheme with a larger budget will be needed.

## Slovakian Scrapping Scheme Additional Information

| Scheme Description | Comment |
|---|---|
| Additional Contribution – Manufacturer/ Dealer | Between €500 and €1,000 from dealers |
| Vehicle Type | M1 category (Car only) |
| Links if any to other commercial offers | Some OEMs offered incentives outside the Scrapping Scheme and after it had ended. |
| **New Vehicles Registered** | **Comment** |
| Price threshold if exists in scheme | <€25,000 |
| Other requirements? | Yes - The New car must be kept by the owner for at least 2 years. |
| **Used Vehicles Scrapped** | **Comment** |
| Consumer Behaviour – Changes/Trends? | Small vehicles and below €25,000 - locally produced cars rise |
| Method of purchase e.g. using Finance, if available | Leasing to buy a new car was forbidden - however several new financing options were put in place & several leasing firms proposed other forms of loans to purchase the vehicle. Leasing companies financed 15,544 passenger cars, during H1 2009, with an aggregate purchase price of €174.5 million. |

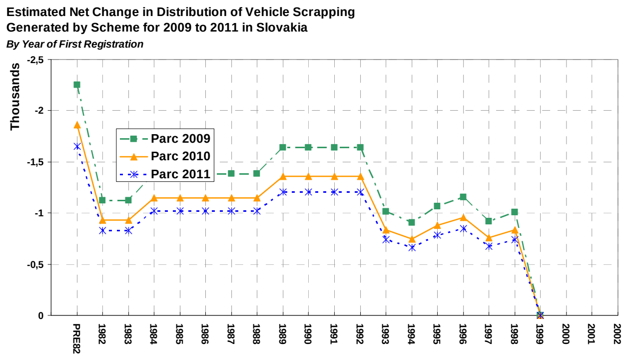
## SALES



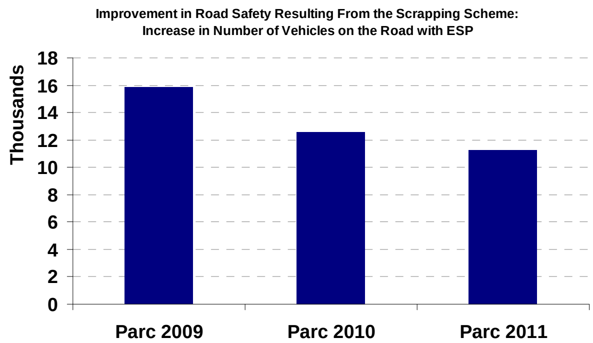

## Total Incremental Sales and Payback

| Slovakia | 2009 | 2010 | 2011 | Payback Rate 2010 |
|---|---|---|---|---|
| Funded Volume | 32,500 | 0 | 0 | |
| New Cars | 24,059 | -4,156 | -2,223 | -17.3% |
| **Total EU Passenger Cars** | **2,164,092** | **-417,492** | **-277,713** | **-19.3%** |
| **Total EU Light Vehicles** | **2,508,668** | **-495,266** | **-317,237** | **-19.7%** |

## PARC



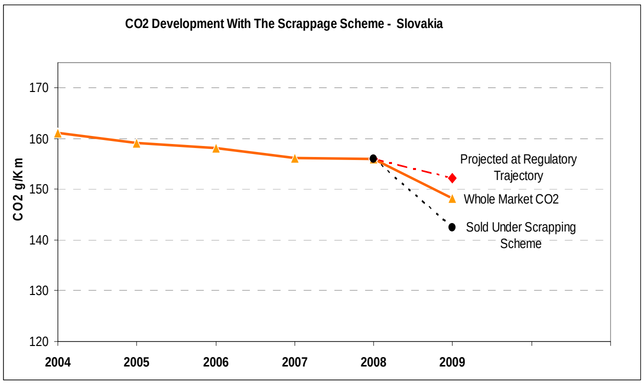

## SAFETY



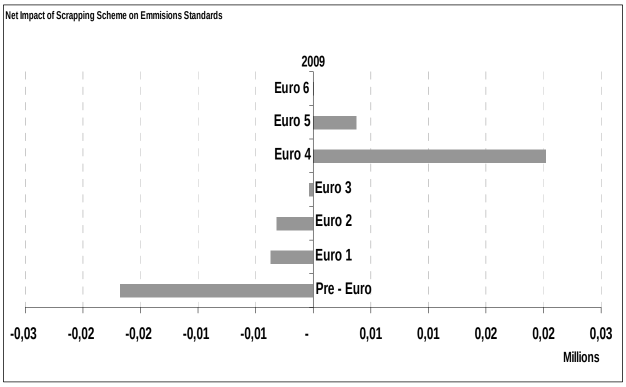
## ECONOMY

| Slovakia | | 2009 | 2010 | 2011 | Global Effect |
|---|---|---|---|---|---|
| Incremental value impact on public finance | M Euros | 12 | -11 | -6 | -5 |
| Incremental value on demand | M Euros | 60 | -16 | -6 | 39 |
| *NIVV produced in country* | M Euros | 30 | -10 | -3 | 17 |
| *NIVV produced outside country* | M Euros | 30 | -6 | -3 | 22 |
| | **Price Effect** | **Medium** | | | |
| Overall Net impact | M Euros | 72 | -27 | -12 | 34 |
| % GDP | % | 0.15% | -0.06% | -0.02% | |
| Incremental Added Value production | M Euros | 9 | -2 | -2 | 6 |
| % AV in AV auto | | 0.50% | -0.09% | -0.08% | |

### Environment – $CO_2$ Curve




### Environment – Euro Norm Impact




### ENVIRONMENT – $CO_2$ Abatement

| Slovakia | | | | % Contribution to Annual $CO_2$ Reduction | | |
|---|---|---|---|---|---|---|
| **$CO_2$ ABATEMENT (Tonnes $CO_2$)** | **2009** | **2010** | **2011** | **2009** | **2010** | **2011** |
| Rejuvenation Mechanism | -7,855 | -6,167 | -3,599 | 74.3% | 73.4% | 64.2% |
| Mix and Technology Mechanism | -2,712 | -2,230 | -2,007 | 25.7% | 26.6% | 35.8% |
| of which Segment Downsizing (A&B) | -2,924 | -2,404 | -2,166 | 27.7% | 28.6% | 38.6% |
| **Total $CO_2$ Reduction - Annual** | **-10,566** | **-8,396** | **-5,605** | **100.0%** | **100.0%** | **100.0%** |
| **Cumulative $CO_2$ Abatement** | **-10,566** | **-18,963** | **-24,568** | | | |

# 13 Spain

**Description**

Spain operated two separate schemes during 2009.

1) **ViVe** (Vehiculo Innovador Vehiculo Ecologico) was first introduced in 2008 with a mixed response. The plan consisted of a 0% finance deal on the first €10,000, and then 2.5% maximum fixed rate on the balance, up to a maximum price of €30,000. The Plan ViVe allowed the purchase to buy a new passenger Car or LCV (<3.5t GVW), also including the purchase of used cars of less than 5 years old. Certain requirements tied the purchaser to certain categories of vehicle. The purchaser had to scrap a vehicle of greater than 10 years old or more than 250,000km to be eligible for the incentive, while if purchasing a used car, the vehicle scrapped should be 15 years or older.

The Scheme requirements stated that a new car or LCV should fall into one of the following categories:

- <120g/km (Vehiculo Ecologico)
- <140g/km (Vehiculo Innovador); equipped with ESC and seat belt indicators for the front seats
- <140g/km, equipped with a 3 way catalyst for gasoline vehicles, or EGR for diesel vehicles
- <160g/km, for all LCV's.

2) **Plan2000e :** after the ViVe plan was exhausted in April 2009, and following strong lobbying from the industry, this second emergency stimulus plan was announced in mid-May 2009. This plan built on the original stimulus "Plan e"—Plan Espanol para el Estimulo de la Economia y el Empleo—published earlier in 2009), came into effect from 1 June 2009, and provided a new, more substantial scrapping incentive. The Plan2000e operates separately to the ViVe.

The Plan2000e allows the purchase of a new passenger Car or LCV (<3.5t GVW), also including the purchase of used cars of less than 5 years old, with a maximum purchase price of €30,000. Certain requirements tied the purchaser to certain categories of vehicle. The purchaser had to scrap a vehicle of greater than 10 years old or more than 250,000km to be eligible for the new vehicle incentive, while if purchasing a used car, the vehicle scrapped should be 12 years or older.

The Scheme requirements stated that a new car or LCV should fall into one of the following categories:

- 120g/km (Vehiculo Ecologico)
- <149g/km (Vehiculo Innovador); equipped with ESC and seat belt indicators for the front seats or equipped with a 3 way catalyst for gasoline vehicles, or EGR for diesel vehicles
- <160g/km, for all LCV's.

This first allocation of the scrapping incentive fund expired by the end of October 2009. The deadline set for the Plan2000e was either 31 May 2010 or 200,000 units whichever occurs first. This initial volume was then supplemented with 80,000 more units, and then extended again with another 200,000 units for 2010.

**Budget**

The ViVe plan consisted of three tranches of funding, released as follows. Once the funding is exhausted in each time period, the scheme is suspended until the start of the next period. The ViVe plan terminates on the 31 July 2010 or when the funding is exhausted.

| VIVE PLAN | |
|---|---|
| 2008 | €200 MILLION |
| 2009 | €500 MILLION |
| 2010 | €500 MILLION |

The Plan 2000e operated with funding from three sources. The national government contribution was matched by funding from the Regional governments of which the majority agreed to participate, with several deciding to decline and operate their own schemes, and others supplementing the National scheme still further.

| PLAN 2000E | | |
|---|---|---|
| May 2009 | €100 million National Government, €100 million Regional Government | 200,000 units or 31 May 2010 |
| Nov 2009 | €40 million National Government €40 million Regional Government | 80,000 units or 31 May 2010 |
| Dec 2009 | €100 million National Government €100 million Regional Government | 200,000 units or 30 Sept 2010 |

**Incentive Value**

Plan ViVe – Low Finance Deal subsidized by a government financing department. The scheme was estimated by the Ministry of Industry, Commerce and Tourism to be equal to circa €2,000.

Plan2000e - In addition to the funding financed by the Spanish National (€500) and Regional (€500) government, the Spanish automotive industry also participated in the Plan2000e Scheme. Spanish manufacturers adhering to the scheme provided a further €1,000 contribution, providing for a potential €2,000 scrapping scheme. When purchasing a used car, the incentive value ranges from €500-1,000 depending on the contribution from the Regional government.

**Timing**

| Date | Scheme |
|---|---|
| 4 Sept 2008 – announced June, funds first released | Plan ViVe – Low Purchase Finance Scheme |
| **November 2008 – scheme redrafted** | Plan ViVe –V2 – Low Purchase Finance Scheme, increased flexibility, extended range |
| End April 2009 – funds exhausted<br>15 May 2009 – final ViVe vehicles processed | Plan ViVe terminated for 2009 |
| 18 May 2009 – new Scheme starts<br>22 May 2009 – official decree passed | Plan2000e – new Scrapping purchase incentive |
| 6 Nov 2009 – official decree modifies scheme | Plan2000e – scheme funds supplemented |
| 28 Dec 2009 – Ministry announces extension<br>January 2010 - official decree passed<br>January 2010 | Plan2000e – Scheme extended for 2010<br><br>Plan ViVe – third tranche of funding restarts |

**Objectives**

While the primary goal of the Plan2000e was clearly to provide an economic stimulus during a severe recession where unemployment was rising to near the 20% level, the Spanish government also combined two further requirements in the terms of the scheme which will help advance established policy objectives in the Environment and Safety spheres. The scrapping scheme therefore promotes the purchase of vehicles with lower $CO_2$ emissions, and the purchase of vehicles equipped with safety enhancing features such as ESP and Seat Belt indicators which it is hoped will contribute towards lowering the level of fatalities on Spanish roads, a campaign that has been in place for over a decade and which supports European wide steps to improve road safety.

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Secondary: Renewal purchase linked to $CO_2$ | Secondary: Renewal purchase linked to Safety |

**New Vehicles Impact**

**Plan ViVe:** according to an information release from the Ministry of Industry, Tourism and Commerce Balance 2009 Plan2000e, on the 2 November 2009, finalized Plan ViVe sales in 2009 equalled 71,439 units.

$CO_2$ data was published by the MITYC in their report to us on the 2 November 2009.

- 57.4% of acquired passenger cars had $CO_2$ <120g/km
- 40.3% of acquired passenger cars had $CO_2$ from 120g/km – 140g/km
- 2.3% of the remaining vehicles were LCV's which emitted less than 160g/km

| Plan ViVe Most Popular Purchased Models (%) | |
|---|---|
| Peugeot 207 | 12.8 |
| Peugeot 308 | 11.2 |
| Citroen C4 | 10.3 |
| Seat Ibiza | 8.0 |
| Citroen C3 | 5.3 |
| Citroen Xsara Picasso | 5.1 |
| Renault Megane | 4.9 |
| Seat Leon | 4.1 |
| Renault Clio | 3.8 |
| Peugeot 308 SW | 2.4 |

**Plan2000e:** according to the Balance 2009 Plan2000e report released by the Ministry of Industry, Tourism and Commerce on 28 December 2009: Plan2000e Sales at 17 December 2009 reached 228,188 units. 200,000 units were fully paid out by the Ministry, with 28,188 still being processed.

IHS Global Insight estimates that the total number of Plan2000e sales reached circa 240,000 units by 31 December 2009. Of the extra volume funded from November 2009, totalling 80,000 sales, a further 40,000 units is now expected to transact in 2010. In addition for 2010, we will see a further 200,000 units.

Key data facts released on the 28 December 2009 provided early indications as follows:

- 98.3% vehicles purchased by a private individual
- 4.6% vehicles purchased by a PYME (Small and Medium sized business)
- 1.6% vehicles purchased by an Autonomo (Sole Trader)
- 91.9% of cars purchased under the plan were New
- 8.1% of cars purchased under the plan were Used
- 59.4% of Used Cars purchased were less than or equal to 2 years old, the balance being over 2 years old and less than 5 years old.

Earlier information released on 2 November 2009 to us by MiTYC indicated that the split of new purchases between Cars and LCV's, at that time total purchases had reached 176,798 units.

- 94.36% Passenger Cars
- 5.64% LCV's

$CO_2$ data available for the Plan2000e was announced in the Ministry's Balance 2009 Plan2000e on 28 December 2009.

- 45% of vehicles purchased emitted less than 120g/km
- 55% of vehicles purchased emitted between 120g/km to 149g/km

A small proportion of those vehicles emitting more than 120g/km will be attributed to LCV's although the Balance2009 Plan2000e did not make this data available.

However, data made available to IHS Global Insight on the 2 November 2009 from the MITYC provided this breakdown.

| Passenger Cars | LCV's |
|---|---|
| 46.1% emit <120g/km | 22.7% emit < 150g/km |
| 53.9% emit 120g/km – 149g/km | 77.3% emit 150g/km – 160g/km |

Unfortunately, the Balance 2009 Plan2000e did not include any data regarding the split of vehicles sales according to vehicle type. There is also no data available regarding the brand and model information of the vehicles purchased under the Plan2000e, although we expect this to become available throughout the course of 2010.

**Used Vehicles Scrapped**

**Plan ViVe:** according to a summary of the Plan2000e provided by the MiTYC to IHS Global Insight on the 2 November 2009: average age of the Plan ViVe scrapped vehicles was 14.9 years old.

| Plan ViVe Most Popular Scrapped Models (%) | |
|---|---|
| Seat Ibiza | 4.9 |
| Peugeot 205 | 4.3 |
| Renault Clio | 4.3 |
| Ford Fiesta | 4.1 |
| Ford Escort | 4.1 |
| Renault 19 | 4.1 |
| Opel Corsa | 3.9 |
| Citroen ZX | 3.6 |
| Opel Astra | 2.7 |
| Peugeot 306 | 2.7 |

| Plan ViVe Most Popular Scrapped Brands | |
|---|---|
| **Renault** | 18.9% |
| Peugeot | 14.3% |
| Citroen | 13.3% |

**Plan2000e:** age breakdown of scrapped vehicles, according to a data release to us on the 2 November 2009 from the Ministry of Industry, Tourism and Commerce, and the Balance 2009 Plan2000e report also released by MITYC on 28 December 2009 is as follows:

| Age of Scrapped Vehicles Plan2000e | |
|---|---|
| **(data release 2 November 2009)** | **( data release 28 December 2009)** |
| 22.65% < /= 12 years old | 49.7% > 10 years old and <15 years old |
| 27.95% > 12 years old but </= 15 years old | |
| 49.4% > 15 years old | 50.3% > 15 years old |
| No Average Age estimate provided | Average Age estimated = 13 years old |

No further data has so far been released by MITYC regarding any detailed analysis of the scrapped vehicles, although we expect this to become available throughout the course of 2010.

**Related Data**

- The financial crisis has also had a negative effect on sources of credit, with liquidity levels more constrained than ever, the banks that are lending have tightened their lending criteria to the extent that only those with an excellent credit history are finding it easy to borrow.
- Estimated 80% of vehicle purchases have historically been bought using finance, (MITYC) therefore Spanish sales were even more affected. The VIVE plan was designed to free up the movement of credit, but the fund for 2009 was exhausted by the end of May 2009.
- It is likely that the VAT increase from 1 July 2010 could have a negative effect on consumer confidence, since it will reduce consumer spending power
- As a result we expect sales in the first half of 2010 to be far stronger, with demand falling back in the second half when purchase incentives terminate, and the VAT increase starts.
- Increased volume of sales via used car retailers followed cessation of the Prever in 2007. The Plan2000e likely to have had an effect on this trend, given that buyers need to go via a dealership to gain the scrapping incentive for purchasing used cars less than 5 years old.
- According to GANVAM, Spain lost an estimated 10% of small and midsize dealers.
- According to GANVAM, estimated 30,000 people in the retail and repairs sector were made

redundant.

- Estimates from GANVAM, ANFAC and FACONAUTO regarding the beneficial effect on public finances centre on figures such as a gain of €566 in taxes per car sold. This is accounted by the increased income from VAT and the Impuesto de Matriculacion.

**Outlook 2010**

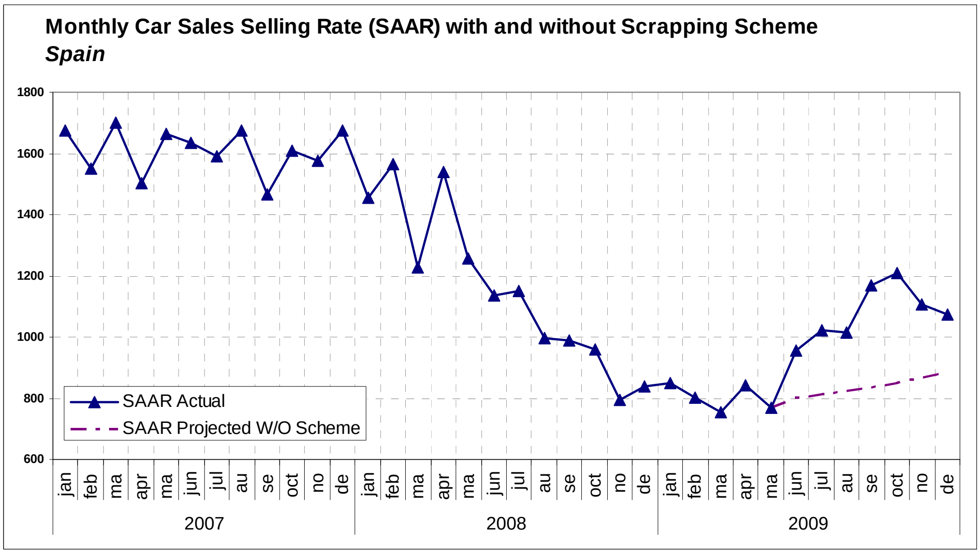
In November 2009, the government announced another extension to fund an extra 80,000 units, at the same time indicating that the Plan2000e scrapping incentive will extend into 2010. In December 2009, the government announced that the Plan2000e would continue along similar format in 2010, with identical levels of funding. Further improvements to the scheme for 2010 included:

- Expansion of the scheme to more sales agents previously excluded in 2009
- Guaranteed right to the subsidy from the moment the sale is transacted without being dependent on the registration of the vehicle.
- Extended system will cover the vehicles which failed to obtain the subsidy in 2009
- Further business types are eligible for the scheme in 2010, including Micro-businesses (micro-empresas) which employ less than 10 people.
- The extended system for 2010 calls for online applications for the subsidy from the 1 January 2010 to the 30 September 2010 or until the maximum of 200,000 units is reached
- The government also decided to include a run-out policy to better and more equitably administer the scheme. When the scheme reaches 70% of the total available vehicles, the Scheme administration will then pro-rate the remaining 30% of funded vehicles among the manufacturers participating in the scheme, and notify the relevant parties of their allocation. This will ensure a more equitable run-out and ensure that sales are not transacted where funds do not exist.

**SPANISH SCRAPPING SCHEME ADDITIONAL INFORMATION**

| Scheme Description | Comment |
|---|---|
| Additional Contribution – Manufacturer/ Dealer | €1,000 from OEM matching the national/regional government, but not applicable to Used Car purchases |
| **New Vehicles Registered** | **Comment** |
| $CO_2$ band or g/km(where available) | Cars <120g, 45.8%; 120-150g, 54.2%; LCV's <150g 21.9%; 150-161g 78.1%. ANFAC estimate 43.6% <120g/km, 56.4% between 120-150g |
| Price threshold if exists in scheme | < €30,000 |
| Other requirements? | Applies to Private, PYME (small med business) and Autonomos (sole traders) |
| **Used Vehicles Scrapped** | **Comment** |
| Age (Averages at least) of Scrapped Vehicles | >15 years; 48.9%, 12-15 years; 27.9%, 10-12 years; 23%, Average age (Anfac) is 13 years old |
| Consumer Behaviour – Changes/Trends? | downsizing, A, B and C benefit, also MPV B's |

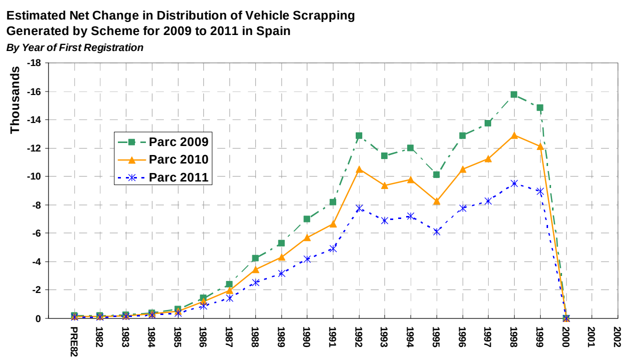
## SALES



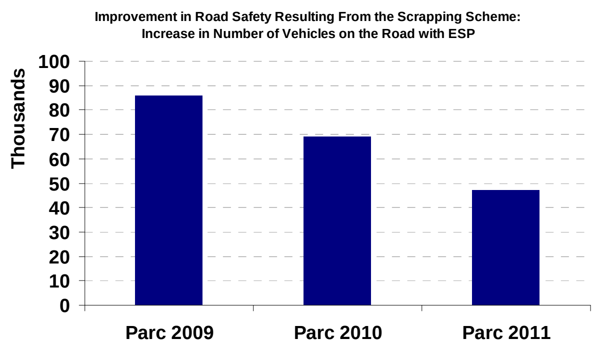

### Total Incremental Sales and Payback

| Spain | 2009 | 2010 | 2011 | Payback Rate 2010 |
|---|---|---|---|---|
| Funded Volume | 240,000 | 0 | 0 | |
| New Cars | 133,659 | -24,341 | -28,846 | -18.2% |
| **Total EU Passenger Cars** | **2,164,092** | **-417,492** | **-277,713** | **-19.3%** |
| **Total EU Light Vehicles** | **2,508,668** | **-495,266** | **-317,237** | **-19.7%** |

## PARC



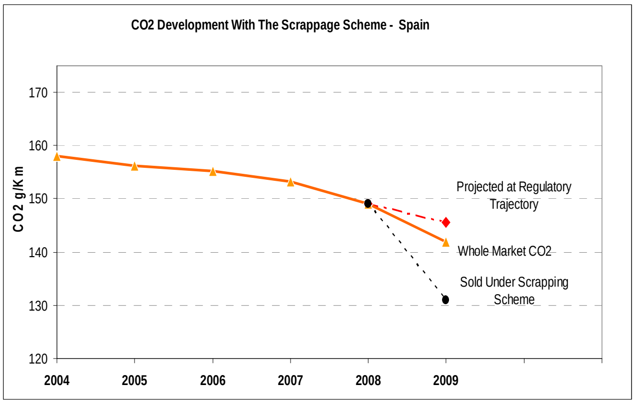

## SAFETY



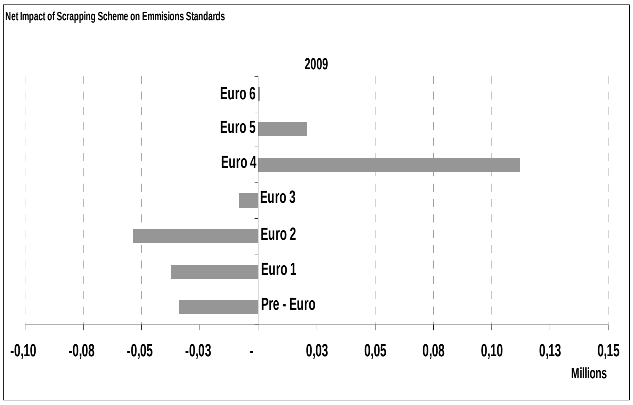
### ECONOMY

| Spain | | 2009 | 2010 | 2011 | Global Effect |
|---|---|---|---|---|---|
| Incremental value impact on public finance | M Euros | 210 | -80 | -90 | 40 |
| Incremental value on demand | M Euros | 790 | -124 | -152 | 514 |
| *NIVV produced in country* | M Euros | 660 | -100 | -120 | 440 |
| *NIVV produced outside country* | M Euros | 130 | -24 | -32 | 74 |
| | **Price Effect** | **No** | | | |
| Overall Net impact | M Euros | 1,000 | -204 | -242 | 554 |
| % GDP | % | 0.11% | -0.02% | -0.03% | |
| Incremental Added Value production | M Euros | 160 | -33 | -12 | 116 |
| % AV in AV auto | | 2.38% | -0.63% | -0.40% | |

### Environment – $CO_2$ Curve




### Environment – Euro Norm Impact




### ENVIRONMENT – $CO_2$ Abatement

| Spain | | | | % Contribution to Annual $CO_2$ Reduction | | |
|---|---|---|---|---|---|---|
| **$CO_2$ ABATEMENT (Tonnes $CO_2$)** | **2009** | **2010** | **2011** | **2009** | **2010** | **2011** |
| Rejuvenation Mechanism | -35,569 | -22,119 | -9,959 | 61.3% | 54.0% | 40.1% |
| Mix and Technology Mechanism | -22,424 | -18,878 | -14,889 | 38.7% | 46.0% | 59.9% |
| of which Segment Downsizing (A&B) | -3,420 | -3,420 | -3,420 | 5.9% | 8.3% | 13.8% |
| **Total $CO_2$ Reduction - Annual** | **-57,993** | **-40,997** | **-24,848** | **100.0%** | **100.0%** | **100.0%** |
| **Cumulative $CO_2$ Abatement** | **-57,993** | **-98,990** | **-123,838** | | | |

## 14 United Kingdom

| | |
|---|---|
| **Description** | Budget 2009 introduced £2,000 Government Scrapping Incentive Scheme (SIS) for buyers of new cars scrapping a vehicle over 10 years old (LCV > 8 years old). Thirty eight manufacturers (forty one marks/brands) signed up to take part. |
| **Budget** | 28 September 2009 scheme extended by further £100 million to total £400 million. Scheme covers up to 400,000 vehicles on "first come - first served" basis until monies run out. Original budget was £300 million from U.K. government (300,000 vehicles). |
| **Incentive Value** | Scrapping incentive worth £2,000 per vehicle: £1,000 from U.K. government + £1,000 matched by support from vehicle manufacturers. |
| **Timing** | Scheme to run 18 May 2009 until end of February 2010 (or until fixed government budget runs out). The new vehicle has to be delivered within four months of the order being placed. This is because the scheme is time limited with a fixed budget. |
| **Objectives** | The scheme is intended to provide a boost to demand and immediate support on a short-term basis to the car industry and its supply chain in the wake of falling sales. It will also get older vehicles off the road and encourage consumers to invest in new, safer and potentially more environmentally friendly models. |

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Not a priority:<br>No specific emissions thresholds. But the scheme uptake is skewed to smaller, lower displacement vehicles | Secondary |

**New Vehicles Impact**

Latest data from BIS – as of 3 January 2010, 314,190 orders received for new vehicles under the government scrapping scheme.

Scrapping accounted for a provisional 20.8% of December sales volumes (31,400 units), with over 286,900 units going through the scheme since its launch in May through to the end of December (provisional figures from SMMT).

New cars registered through the scheme had an average $CO_2$ value of 133g/km. This was 10.1% below the 148g/km average of all new cars registered between May and November, and 27.0% below the average $CO_2$ of the scrapped car. The average $CO_2$ emissions of an old car scrapped through the scheme is estimated to be 182.1g/km (based on weighted segment data for 1997 vintage cars, with the average age of scrapped vehicles being 12.9 years).

Almost three-quarters (72%) of cars registered through the scheme are small cars, from the A and B Segments, well above the share recorded by the overall market or by cars being scrapped through the scheme between May and November.

Private buyers account for 99% of the cars bought through the scheme between May and November.

Petrol cars account for 84% of cars bought through the scrapping scheme, compared with 58.5% recorded in the overall market between May and November.

In summary, the favourite vehicle under the scheme is a small, privately purchased petrol engine car.

**Used Vehicles Scrapped**

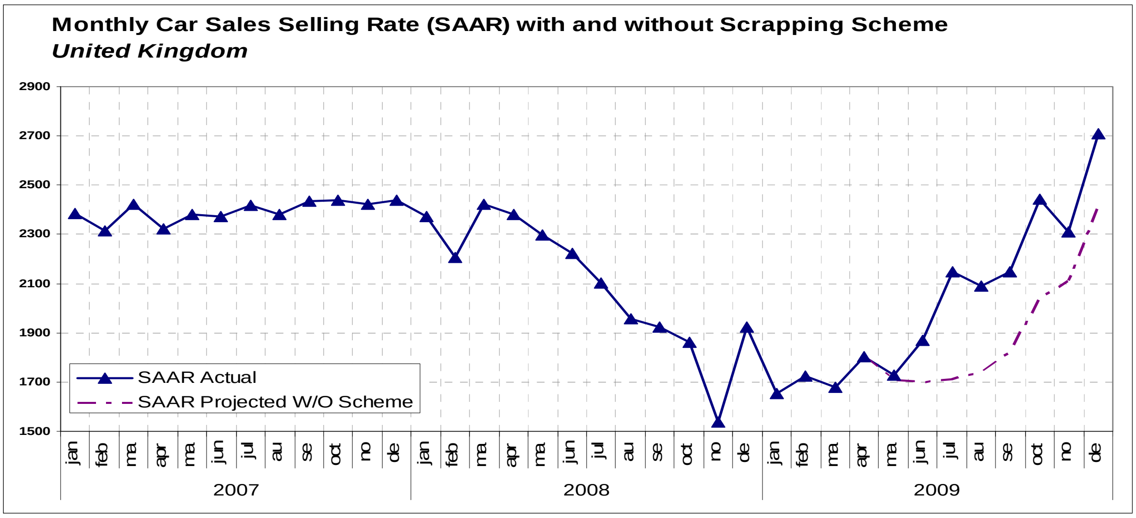
The average $CO_2$ emissions of an old car scrapped through the scheme is estimated to be 182.1g/km (based on weighted segment data for 1997 vintage cars).

| | |
|---|---|
| | The average age of scrapped vehicles being 12.9 years (based on weighted segment data for 1997 vintage cars).<br><br>Brand and model information for the scrapped vehicle has not been released. |
| **Related Data** | It remains too early to say if OEMs will continue to offer their own scrapping schemes as the government scrapping scheme remains in play until the end of February 2010. However, this appears likely as some carmakers are already matching the incentive deal for cars over 8 years old. These vehicles do not have to be scrapped – and are effectively "trade-ins" e.g. Nissan, Skoda, Citroen.<br><br>Model line data is being kept confidential by BIS as part of the conditions of the scrapping scheme. This is to avoid carmakers being able to mine the model line data and fine tune their own deals during the scheme.<br><br>Figures released by SMMT and Experian show sales of used cars through the third quarter of 2009 fared better than those for new car. Year-to-September used car sales volumes are down just 5.3% on the same period in 2008, to 5,339,232 units. New car sales fell -15.5% in the same period. |

**UK Scrapping Scheme Additional Information**

| Scheme Description | Comment |
|---|---|
| Additional Contribution – Manufacturer/ Dealer | £1,000 from government + £1,000 matched by support from OEM |
| Links if any to other government schemes | Not directly linked but could influence timing of transactions - Lower 15% rate of VAT on car purchase runs from 1 December 2008 to 31 December 2009 (then reverts back to 17.5%) |
| Links if any to other commercial offers | Many OEMs running associated financing deals and incentives - some extending scrapping scheme rules to non-compliant vehicles e.g. cars up to 8 years old (trade-in not scrap) |
| **New Vehicles Registered** | **Comment** |
| Fuel Type | Petrol cars account for 85% of cars bought through the scheme (19 May - 30 September). Compares to 59.3% for total registrations for this period |
| $CO_2$ band or g/km(where available) | New cars registered through the scheme had an average $CO_2$ value of 132.1g/km. This was 10.9% below the average of all new cars registered between May and September, of 148.2g/km, and 27.4% below the average $CO_2$ of the scrapped car.<br>Total new cars averaged 150.2g/km of $CO_2$ over the year-to-September, 4.9% down on the full year 2008 performance. |
| **Used Vehicles Scrapped** | **Comment** |
| Age (Averages at least) of Scrapped Vehicles | Average age of scrapped vehicle 12.6 years (for period 19 May - 30 Sept) |
| Used Car sales | H1 2009 3.6 million (down by 6.0% on H1 2008) |
| Consumer Behaviour – Changes/Trends? | Nearly new (0-3yrs) used cars making up smaller proportion of YTD8 sales (signs of buyer defection into incentivised new car market) |
| Method of purchase e.g. using Finance, if available | Year-to-August 2009<br>Private Consumers: New cars 409,446 (-19%)<br>Private Consumers: Used cars 631,523 (-10%)<br>Business: New cars 359,578 (-22%)<br>Business: Used cars 50,227 (-16%) |

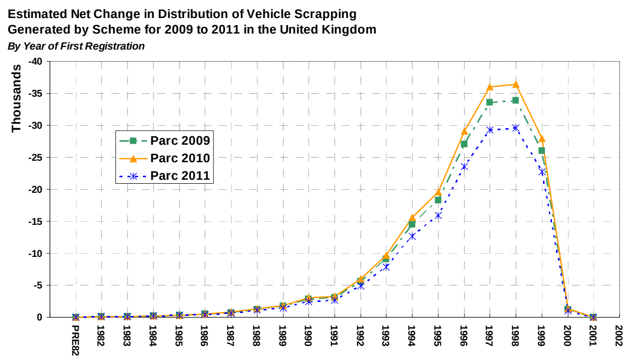
## SALES



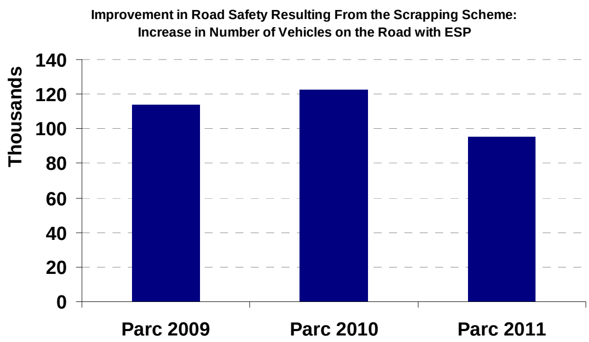

### Total Incremental Sales and Payback

| UK | 2009 | 2010 | 2011 | Payback Rate 2010 |
|---|---|---|---|---|
| Funded Volume | 287,000 | 0 | 0 | |
| New Cars | 179,988 | 13,222 | -36,143 | 7.3% |
| **Total EU Passenger Cars** | **2,164,092** | **-417,492** | **-277,713** | **-19.3%** |
| **Total EU Light Vehicles** | **2,508,668** | **-495,266** | **-317,237** | **-19.7%** |

## PARC



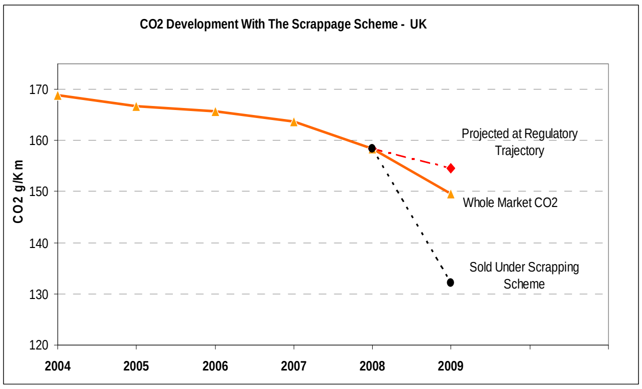

## SAFETY



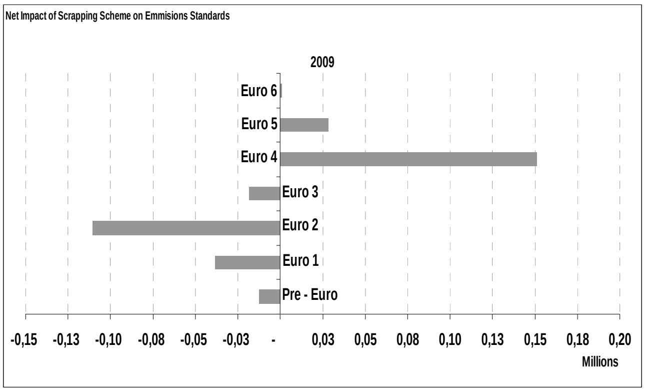
## ECONOMY

| UK | | 2009 | 2010 | 2011 | Global Effect |
|---|---|---|---|---|---|
| Incremental value impact on public finance | M Euros | 30 | -110 | -70 | -150 |
| Incremental value on demand | M Euros | 465 | 47 | -118 | 394 |
| *NIVV produced in country* | M Euros | 260 | 30 | -70 | 220 |
| *NIVV produced outside country* | M Euros | 205 | 17 | -48 | 174 |
| | **Price Effect** | **High** | | | |
| Overall Net impact | M Euros | 495 | -63 | -188 | 244 |
| % GDP | % | 0.03% | 0.00% | -0.01% | |
| Incremental Added Value production | M Euros | 356 | -33 | -12 | 312 |
| % AV in AV auto | | 4.38% | -0.63% | -0.40% | |

### Environment – $CO_2$ Curve




### Environment – Euro Norm Impact




## ENVIRONMENT – $CO_2$ Abatement

| UK | | | | % Contribution to Annual $CO_2$ Reduction | | |
|---|---|---|---|---|---|---|
| **$CO_2$ ABATEMENT (Tonnes $CO_2$)** | **2009** | **2010** | **2011** | **2009** | **2010** | **2011** |
| Rejuvenation Mechanism | -54,256 | -46,710 | -27,527 | 51.1% | 45.7% | 38.0% |
| Mix and Technology Mechanism | -51,848 | -55,522 | -44,980 | 48.9% | 54.3% | 62.0% |
| of which Segment Downsizing (A&B) | -45,240 | -48,445 | -39,374 | 42.6% | 47.4% | 54.3% |
| **Total $CO_2$ Reduction - Annual** | **-106,105** | **-102,231** | **-72,507** | **100.0%** | **100.0%** | **100.0%** |
| **Cumulative $CO_2$ Abatement** | **-106,105** | **-208,336** | **-280,843** | | | |

## 15 Japan

**Description**

Consumers can enjoy government incentives when purchasing eco-friendly cars. This incentive consists of two parts. One relates to trading in a vehicle over 13 years old when purchasing a new vehicle. The other relates to purchasing without trading in.

**Definition**

The following eco-friendly cars are eligible for these incentives.

*With trade-in*: Passenger cars and commercial vehicles: PHV, EV, CNG, fuel-cell, and hydrogen vehicles. Petrol passenger cars must comply with the 2010 fuel consumption standard, while diesel passenger cars must comply with the 2005 emission regulation, and commercial vehicles must comply with the 2005 emission regulation.

*Without trade-in:* Passenger cars and commercial vehicles: PHV, EV, CNG, fuel-cell, and hydrogen vehicles. Petrol passenger cars must comply with the 4-star emission standard and improve fuel consumption by 15% of the 2010 fuel consumption standard, while diesel passenger cars must comply with the 2005 emission regulation, and commercial vehicles must comply with the 2015 fuel consumption standard and improve the NOx or PM level by 15% of the 2005 standard.

**Budget**

A total of ¥370 billion has been allocated. The government estimated that this is equivalent to 2.8 million vehicles.

**Incentive Value**

*With trade-in:* Passenger cars ¥250,000 (¥125,000 for mini-vehicles), small commercial vehicles (3.5t GVW) ¥400,000, medium-sized commercial vehicles (7.5t GVW) ¥800,000, large commercial vehicles (12t GVW) ¥1.8 million.

*Without trade-in:* Passenger cars ¥100,000 (¥50,000 for mini-vehicles), small commercial vehicles (3.5t GVW) ¥200,000, medium-sized commercial vehicles (7.5t GVW) ¥400,000, large commercial vehicles (12t GVW) ¥900,000.

**Timing**

The incentives began on 19 June 2009 and will end on 31 March 2010. Vehicles registered between 10 April and 19 June can also benefit from these incentives.

**Objectives**

The incentives together with a reduction in the tax on environmentally friendly cars satisfied two objectives: to boost sales and to encourage consumers to use environmentally friendly cars.

**Assessment of Scheme Objective – Japan**

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Primary | Not a priority |

**New Vehicles Impact**

As of 24 December 2009, 1.58 million applications had been made (1.34 million were approved). Consequently, in 2009, the market improved by 1.58 million units. The total comprised 1.1 million light vehicles (excluding the Kei-car*), 307,000 Kei-cars, and 11,481 heavy commercial vehicles.

As the incentive on the Kei-car was half of that on standard cars, this incentive scheme favoured sales of standard cars.

Among standard cars, we saw a big boom in HV sales in 2009, thanks to eligibility to full incentives and tax reduction. Other than the incentive value, there was an advertising problem when the government introduced the scheme. Many people did not know that the incentives would apply to other conventional vehicles. Consequently, new HV models were the main beneficiaries of the scheme.

The Honda Insight and Toyota Prius sold very well at first. Then sales of Toyota's new HVs, the

Lexus HS-series, and the Toyota SAI boomed (orders started being received in October 2009). However, as consumers began to understand the incentive better, and as the bookings of most of the HV units available for registration by March 2010 ended earlier than anticipated, more consumers started buying other fuel-efficient models to get incentives. Therefore, as year-end approached, sales of other fuel-efficient vehicles that were eligible for the incentives, such as the Honda Fit and Freed, increased.

As a consequence, Toyota and Honda HV's accounted for about 30% of the 1.1 million incentive applications for light vehicles.

*Kei-car: A vehicle whose engine displacement is less than 660cc

**Used Vehicles Scrapped**

A total of 1.58 million applications put in by 24 December 2009. Of these, 417,000 vehicles were purchased when trading in vehicles over 13 years old. In other words, 417,000 vehicles over 13 years old were scrapped under this incentive scheme between June and December 2009.

Between January and March 2009 (before the incentives were introduced), about 22% of scrapped vehicles were over 13 years old. This rose to 35% (on average) between April and June, and it peaked at 41% in July. It has hovered around 35% since August, and it is slowing. However, after January 2010, when vehicles produced in 1997 became eligible for the incentives, again, the ratio is expected to rise. In 1997, the Japanese vehicle market boomed because of the pre-buying effect before the hike in the consumption tax (from 3% to 5%), and there are many vehicles produced in 1997 on the road now.

There is no model-level scrapping data available so far in Japan. However, we estimate that the vehicles scrapped are mostly small to medium-sized domestically made passenger cars. There are few large/luxury vehicles (especially imported ones) because the resale price is usually above the incentive value of ¥250,000, even if they are old.

**Related Data**

In December 2009, the government decided to extend the scrapping incentive by 6 months to September 2010. We estimated that the pure increase in sales will be around 250,000 units in 2010. With the incentive effect from January to March, the light vehicle market will increase by about 6.5% to 4.86 million units in 2010.

Currently, vehicles imported in small numbers (fewer than 2,000 units) are not required to have type approval by the Japanese government if they are approved in the country of origin, assuming that country has joined the type approval treaty. However, under this incentive scheme, the government decided that the vehicles should have type approval in Japan to be eligible for the incentives. This decision has been criticized as a non-tariff barrier, though, especially by U.S. carmakers that import on a small scale. Nonetheless, in January 2010, the government announced that vehicles that did not have to take type approval in Japan would be eligible for incentives. The decision will affect those units bought in 2009. The incentive effect will be upgraded soon.

## 16 South Korea

**Description**

The South Korean government in March 2009 announced a range of measures designed to stimulate local demand for vehicles, as well as offering support for R&D and mergers and acquisitions. As part of the stimulus measure, the government temporarily reduced consumption, registration, and acquisition taxes for newly purchased vehicles by 70%, up to a value of 2.5 million won (US$1,833), from 1 May until the end of 2009. The scheme was only open to owners of vehicles registered prior to 1 January 2000 (affecting 5.48 million out of 16.79 million registered cars).

Acknowledging the difficulties in financing new vehicles due to a reduction in liquidity in the markets, the ministry announced also that it will make an effort to increase the availability of credit, and that the government could buy up corporate bonds issued by vehicle financing businesses.

The government also provided some support to automakers by offering funds for R&D activity that yields an improvement in vehicle fuel efficiency by 5% annually in the coming years and leads to a 10% increase in both production and exports. Areas in which this will be focused include plug-in hybrids and related components.

Other measures include the creation of a 1-trillion-won pool of funds by a group of investors including the state-run Korea Development Bank (KDB) to facilitate restructuring and consolidation in the industry, which could also be used to buy stakes in foreign component suppliers.

**Budget**

The budget amounts to 500 billion KRW (around £267 million) for all incentive schemes.

**Incentive Value**

The maximum incentive value totals 2.5 million KRW (around £1,340) per vehicle.

**Timing**

The scheme ran from 1 May 2009 until 31 December 2009.

**Objectives**

Korean automakers and component suppliers had been feeling the heat both locally and overseas from the downturn in vehicle demand amid the global economic downturn.

Thus, the scheme objective was to stimulate vehicle demand in the country. I.e. through tax reductions, incentivize owners of ageing cars to acquire new vehicles.

| Economic | Environmental | Safety |
|---|---|---|
| **Primary** | **Secondary:**<br><br>side effect: Switch to newer, more environmentally friendly vehicles | **Secondary:**<br><br>side effect: Switch to safer vehicles |

**New Vehicles Impact**

Beneficiaries include first and foremost the big 5 local producers: Hyundai, Kia, Daewoo, Samsung and Ssangyong.

Types of vehicles scrapped are mainly cars.

# 17 Turkey

**Description**

The government offered a 'Tax holiday' of six months on the Special Consumption Tax (OTV) for new car sales. When purchasing a car in turkey the costumer has to pay two different taxes: TVA and OTV. The TVA has a fixed value of 18%, wile the OTV varies depending on vehicle type (car and LCV) and engine capacity. The government reduced the OTV for some vehicle segments. The consumer had to purchase a Euro 4 vehicle. There was no requirement to scrap a vehicle, so this was not strictly a scrapping scheme.

**Budget**

Not known.

**Incentive Value**

Special Consumption Tax (OTV) discount for some vehicle segments.

| Vehicle Type | Engine Capacity | Normal OTV | After 15/3/2009 | After 15/6/2009* |
|---|---|---|---|---|
| **Car** | Below 1,600c | 37% | 18% | 27% |
| | 1,600cc–2,000cc | 60% | 54% | 60% |
| | Over 2,000cc | 84% | 80% | 84% |
| **LCV** | Below 3,000cc | 10% | 1% | 3% |
| | 3,000cc–4,000cc | 52% | 52% | 52% |
| | Over 4,000cc | 75% | 75% | 75% |

**Timing**

The tax reductions began on the 15 March 2009, the second stage started on the 15 June 2009 and the scheme ended on the 30 September 2009.

**Objectives**

Economic – to stimulate vehicle sales.

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Not a priority | Not a priority |

**New Vehicles Impact**

The new vehicle market grew by around 10%, circa 30,000 units.

**Used Vehicles Scrapped**

No vehicles scrapped under this scheme

## 18 United States

**Description**

The Consumer Assistance to Recycle and Save Act, aka 'CARS' aka 'Cash-for-Clunkers' was introduced by the U.S. Government on 24 June 2009. The government vehicle scrapping program was administered by the National Highway Traffic Safety Administration (NHTSA) and was scheduled to run from 1 July 2009 through 1 November 2009, or whenever the allotted funds ran out. The program issued a monetary credit of between US$3,500-4,500 to consumers who met specific vehicle trade-in and new purchased/leased vehicle qualifications. Trade-in vehicles had to be continuously insured for one-year prior to transaction, be in drivable condition, and no more than 25 years old. The program required that all vehicles consequently traded-in to undergo a permanent disabling of the engine, to be done by the participating dealer. The U.S. government's intentions for the scheme were to introduce a modernization of the existing vehicle fleet in order to improve fuel-efficiency and to jump-start stagnating light-vehicle sales as a result of the economic recession.

**Budget**

The CARS act initially appropriated US$1 billion for the program, including US$50 million for administrative purposes. The popularity of the program through the first weeks of its availability required a government appropriation of an additional $2 billion on 7 August 2009.

In the end NHTSA paid US$2,853,416,000 in claims, and administrative costs ran closer to US$100 million than the estimated $50 million at the beginning of the program.

**Incentive Value**

The value of the credit given for the new vehicle, whether purchased or leased, was determined by the fuel efficiency improvements achieved over the traded-in vehicle. Vehicles were categorized into specific groupings: passenger cars, Category 1 trucks, Category 2 trucks and Category 3 trucks. All vehicles traded-in had to have combined (city/highway) ratings of 18 miles per gallon (MPG) or less. For new passenger cars, the new fuel-efficient vehicle required a combined fuel economy value at least MPG greater than that of that the trade-in vehicle in order to qualify for the US$3,500 rebate. If the difference was 10 MPG or more, it would qualify for a US$4,500 rebate. If the new vehicle was a Category 1 truck that had a combined fuel economy value that is was at least two, but less than five, MPG higher than the traded-in vehicle, the credit was $3,500. If the new Category 1 truck had a combined fuel economy value that was five miles per gallon higher than the traded-in vehicle, the credit was $4,500. The Category 2 and Category 3 sectors for trucks were reserved for pickups and vans with specific classification requirements based on wheelbase and cargo area. The MPG improvement requirements were smaller for these two categories. New Category 2 trucks were eligible for both the US$3,500 and US$4,500 credits. New Category 3 trucks were only eligible for the US$3,500 credit.

**Timing**

At its conception, the CARS program was scheduled to run from 1 July 2009 through 1 November 2009. The Act was signed into effect on 24 June 2009, and the final program requirements and implementation protocol were established by NHTSA on 23 July 2009. The CARS system was opened for dealer registration on 24 July 2009, and auto dealers were allowed to begin submitting transactions for approval 27 July. The initial response to the program was overwhelming and within the first few days of the scheme it was apparent that the appropriated US$1 billion would be exhausted quickly. On 7 August the additional $2 billion in funding was approved. NHTSA closed the program to new transactions on 24 August in anticipation that all the $3 billion had been used. The program lasted an official 27 days.

**Objectives**

The first half of 2009 was the most tumultuous period that the U.S. auto industry had ever seen. In the grips of the economic recession, vehicle sales were at their lowest post-WWII levels and by June both General Motors (GM) and Chrysler LLC had declared bankruptcy. The government-sponsored incentive program was as much a shot in the arm for a struggling industry as it was to improve the fuel efficiency of the vehicle fleet and provide a short-term economic stimulus. With the U.S. government's US$82 billion bankruptcy-bailout investment covering both GM and Chrysler LLC, it was very eager to help out the struggling industry sales levels to assist not only these companies, but huge network of auto suppliers and auto dealers dependent on them.

| Economic | Environmental | Safety |
|---|---|---|
| Primary | Primary | Not a priority |

There were no safety initiatives explicitly stated by the government under the program, however older model year vehicles traded in likely did not have the updated safety requirements new automobiles provide. It will be debated as to the exact economic impact the program had, but official government reports peg contribution to 2009 GDP of US$3.6 billion (Council of Economic Advisors Report – 10 September 2009) to US$3.8 billion (NHTSA Report to U.S. Congress – December 2009).

**New Vehicles Impact**

In the final CARS tally, 677,842 new light vehicles were registered via the program. To qualify, new vehicles purchased under the program had to have a manufacturer's suggested retail price (MSRP) of under US$45,000. According to NHTSA data, the average MSRP for new vehicles via the program was US$22,450. Passenger cars represented 59 percent of the new vehicles, while trucks including SUVs, pickups and vans accounted for the other 41 percent of the transactions.

| New Vehicles Purchased | | |
|---|---|---|
| **Category** | **Number of Transactions** | **Share of Transactions (%)** |
| Passenger Car | 401,274 | 59.2 |
| Category 1 Truck | 225,985 | 33.34 |
| Category 2 Truck | 48,617 | 7.17 |
| Category 3 Truck | 1,966 | 0.29 |
| **Total** | **677,842** | **100** |

*SOURCE: NHTSA*

According to the CARS program statistics, Toyota accounted for 19.4% of the new vehicles purchased under the program, followed by General Motors (17.6%), Ford (14.4%), Honda (13.0%), Hyundai-Kia (11.5%) and Nissan (8.7%).

There is a bit of contention in regards to the best selling vehicles under the scheme. NHTSA reports reflect the top 10 vehicles sold under the program as follows: Toyota Corolla, Honda Civic, Toyota Camry, Ford Focus FWD, Hyundai Elantra, Nissan Versa, Toyota Prius, Honda Accord, Honda Fit, and Ford Escape FWD, respectively. However, the NHTSA classification system breaks each model down by driveline and sometimes fuel type. More aggregate tallies reflect that both the Ford F-Series and Chevrolet Silverado full-size pickups were amongst the top sellers.

According to NHTSA approximately 49 percent of the vehicles sold under the program were produced domestically.

**Used Vehicles Scrapped**

SUVs, pickups and vans accounted for 89 percent of the traded-in vehicles under the program. According to NHTSA calculations, the average age of the trade-in was 14 years, and the average odometer reading was 160,170 miles. Various sources confer that the top-three most traded-in vehicles were the Ford Explorer SUV (9.9% of all trade-ins), followed by the Ford F-Series pickup (8.4%) and Jeep Grand Cherokee SUV (6.1%). Gas-guzzling light trucks built by the Detroit manufacturers accounted for the lion's share of traded-in vehicles.

| Trade-in Vehicle Data | | |
|---|---|---|
| **Category** | **Number of Transactions** | **Share of Transactions (%)** |
| Passenger Car | 94,834 | 13.99 |
| Category 1 Truck | 446,323 | 65.84 |
| Category 2 Truck | 129,732 | 19.14 |
| Category 3 Truck | 6,953 | 1.03 |
| **Total** | **677,842** | **100** |

*SOURCE: NHTSA*

**Related Data**

| AVERAGE DIFFERENCE IN FUEL ECONOMY (Mean) | | | |
|---|---|---|---|
| **Category** | **Trade-in MPG** | **New Vehicle MPG** | **Difference in MPG** |
| Passenger Car | 17.7 | 28.0 | 10.3 |
| Category 1 Truck | 15.9 | 21.4 | 5.5 |
| Category 2 Truck | 14.1 | 16.2 | 2.1 |
| All Categories | 15.7 | 24.9 | 9.2 |

*SOURCE: NHTSA*

Statistics from the program show that the mpg improvement from traded-in vehicles to new vehicles was significant. However, transaction data also showed that one of the most popular deals under the program was the exchange of an old full-size pickup truck for a new full-size pickup. We believe that as a short-term economic program, the CARS program proved that focused government stimulus can have an immediate impact on consumer spending; however the long-term economic effect of the program will be debated. If the government's economic intentions for the program were grander, more money would have been appropriated. As an environmental bill, the CARS program could also have been more focused, with more stringent MPG requirements that could have excluded the purchase of "gas-guzzling" new full-size pickups.

As for the impact on auto sales levels, prior to months of July and August, during which the program was available, monthly light vehicle sales in H1 2009 averaged a seasonally adjusted annual selling rate (SAAR) of 9.5 million units. In July, the SAAR reached 11.2 million with the full effect on sales felt in August, when the SAAR hit 14.1 million units. Payback was certainly felt in September, when the monthly SAAR sank back to 9.2 million units. The payback-effect will continue to be debated until more data is available, especially in regards to the number of used-car buyers that were swayed by the program to purchase new vehicles. This type of buyer via the program would represent incremental new-car buyers and would lessen future payback figures. The figures have also come to bear that the rise in overall sales during the program was less than one would expect simply by adding clunker sales to the previous running rate. Therefore we believe that it is likely that a chunk of the scrapping program sales (approximately one-half would have occurred anyway during those months and suggests that fewer sales were pulled forward from the future. We expect that most of the CARS payback occurred in September 2009, and that the effect on 2010 sales levels won't be a harsh as initially expected.

In conjunction with announced production cuts by manufacturers (resulting from bankruptcies and dismal sales levels), the scrapping program helped thin-out the record level of vehicle inventory for the manufacturers. At the end of June 2009, AutoData reported a Days' Supply inventory for all manufacturers of 61 days. By the end of August 2009, the industry Days' Supply figures stood at 28 days. (Days Supply figures are not adjusted for seasonality)