

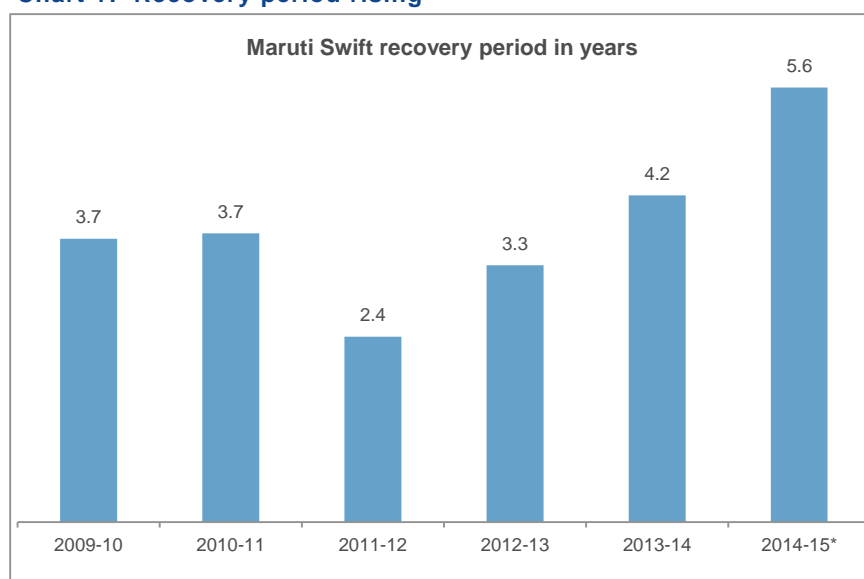
Buying a diesel car makes less economic sense now

Time taken to recover the premium paid over a petrol variant has nearly doubled

Diesel cars have been smoking hot in the last couple of years because of a wide differential in the price of fuel in India driven by disparities in excise duty and sales tax. But with the price gap between petrol and diesel narrowing sharply since fiscal 2012, the extra money paid to buy a diesel variant no longer makes economic sense.

Here's the math: In fiscal 2012, when the fuel price differential was at its widest, it took around 2.5 years to recover the premium paid to buy a diesel car, considering the savings made on fuel as well as resale price. Today, it will take nearly six years to recoup the money. This takes into account average car usage in India, which is 10,000 km annually (Chart 1). If one also factors in the time value of money, recovering the price premium will take even longer. This clearly indicates that purchasing a diesel car today does not make economic sense for private users, unless justified by usage. For commercial users, however, diesel cars still make economic sense given that usage will be much higher.

Chart 1: Recovery period rising



*As of Sept 2014; assumes savings through higher price obtained for diesel cars vis-à-vis petrol on resale

Source: CRISIL Research

Diesel cars have typically been priced higher in India compared with petrol variants because of technology costs, better mileage, cheaper cost of fuel and demand. This “price premium” ranges from about Rs 1 lakh for small car models to as high as Rs 3 lakh for luxury sedans. In percentage terms, diesel cars in India are priced 20-25% higher than the petrol variant for the same model, which is higher than the average of 10% price premium in the European Union.

Fuel cost, which is a calculus of fuel price and mileage, is one of the major components of the ownership



cost of a car. Annual fuel costs is currently estimated to be about 30% less for a diesel variant (*Table 1*). But this number has been decreasing -- after touching a peak of 50% in fiscal 2012 -- as the government began to bite the subsidy bullet and raising the price of diesel.

What this has done is stretch significantly the time taken for a diesel car owner to recover that extra money paid for purchase, or the so-called “recovery period”. Considering the way diesel and petrol prices are converging, the recovery period for a first-hand diesel car will be close to the higher end of the typical holding -- or ownership -- period of between four and six years if it is driven 10,000 kms per annum.

For luxury and utility vehicles, the recovery period will stretch even more because of the greater price differential between petrol and diesel variants (*Table 1*). Yet, diesel variants will remain attractive in this segment because buyers tend to focus a lot on performance metrics such as extra power and torque (*Table 2*).

But the ownership cost equations will change if car manufacturers decide to reduce the price premium for diesel vehicles, which is a possibility given the converging fuel prices.

With the price of petrol declining and that on diesel rising towards market linkage, we expect the average petrol-to-diesel price ratio to reach a decadal low of 1.2 times in this fiscal, and remain thereabouts on full deregulation. This differential is similar to what is seen in many parts of Europe, wherein the duty structure has favoured diesel due to its implication on the road transport sector.

What this trend will also do is ensure the return to dominance of petrol vehicles. Manufacturers seem seized of the trend and have recently launched petrol variants in sedans as well as utility vehicles (UVs) – segments traditionally dominated by diesel. In the last fiscal, the share of diesel sedans and UVs was 70-75%, while in small cars it was about 35%.

Table 1: It's advantage petrol again

Segment	Small cars	Sedans	UV1	Luxury car
Model name	Maruti Suzuki Swift	Maruti Suzuki Swift DZire	Honda Mobilio	Skoda Superb Elegance
Car Price: Petrol variant (Rs. lakh)	4.42	4.85	6.49	22.23
Car Price: Diesel variant (Rs. lakh)	5.46	5.79	7.89	25.09
Price differential (Rs lakh)	1.04	0.94	1.40	2.86
Percentage of differential recovered on resale of diesel car	40%	40%	40%	40%
Mileage: Petrol variant (km/litre)	18.6	19.1	17.3	13.1
Mileage: Diesel variant (km/litre)	22.9	23.4	24.2	17.2
Mileage differential (per cent)	23.1%	22.5%	39.9%	31.3%
Fuel Price: Petrol (per litre)	68.51	68.51	68.51	68.51
Fuel Price: Diesel (per litre)	58.97	58.97	58.97	58.97
Difference in petrol and diesel prices (Rs.)	9.54	9.54	9.54	9.54
Average distance travelled per annum (km)	10,000	10,000	10,000	10,000
Savings on diesel (Rs per annum)	11,082	10,668	15,233	18,013
Time to recover (in years)	5.6	5.3	5.5	9.5

Note: (i) Model prices are ex-showroom, New Delhi, as of Sept, 2014.

(ii) Mileages are ARAI certified

(iii) Fuel prices are New Delhi prices as of August 31, 2014.

(iv) Savings on diesel is the difference between the fuel expenses involved in running a diesel variant vis-à-vis a petrol variant. Maintenance costs assumed to be similar for petrol and diesel variants.

(v) Recovery period calculated after considering savings on account of higher resale value of diesel cars vis-à-vis petrol

Source: CRISIL Research

Chart 2: Recovery period sensitivity of Maruti Suzuki Swift

Difference in petrol and diesel prices	Kms travelled per annum (km)					
	5,000	10,000	12,500	15,000	20,000	25,000
5.0	13.7	6.9	5.5	4.6	3.4	2.7
9.5	11.3	5.6	4.5	3.8	2.8	2.3
15.0	9.3	4.6	3.7	3.1	2.3	1.9
20.0	8.0	4.0	3.2	2.7	2.0	1.6
25.0	7.0	3.5	2.8	2.3	1.7	1.4
30.0	6.2	3.1	2.5	2.1	1.6	1.2

Note: (i) Figures in green indicate recovery made within the holding period of about 6 years (typical holding period for a small car).

(ii) The current difference in petrol and diesel prices is Rs. 9.54 per litre

Source: CRISIL Research

Table 2: Diesel engines have better performance metrics

Variant	EcoSport Titanium 1.5 Ti-VCT	EcoSport Titanium 1.5 TDCi
Fuel	Petrol	Diesel
Engine displacement	1499 cc	1498 cc
Max power	112 bhp @ 6300 RPM	91 bhp @ 3750 RPM
Max torque	140 Nm @ 4400 RPM	204 Nm @ 2000-2750 RPM

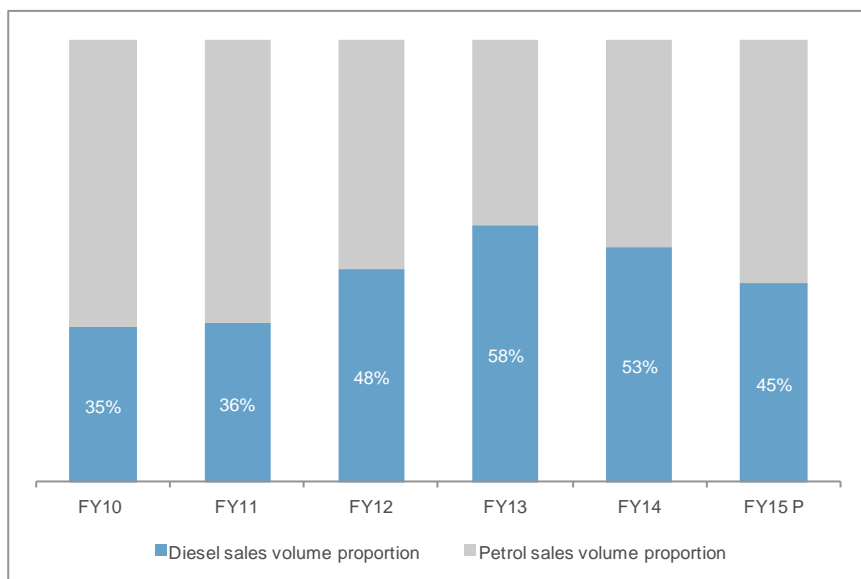
Note: (i) cc: cubic centimetre, bhp: brake horse power, RPM: revolutions per minute, Nm: Newton metre

Source: Ford

Declining market share of diesel variants

The share of diesel variants in total domestic sales of passenger cars and utility vehicles has started falling since peaking at 58% in fiscal 2013 (*Chart 3*). We expect diesel vehicles to close this fiscal with 45% of the market even as the share of petrol cars runs up to 55% from 42% that year.

Chart 3: Petrol clawing back



Note: P: Projected

Source: Industry, CRISIL Research

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