



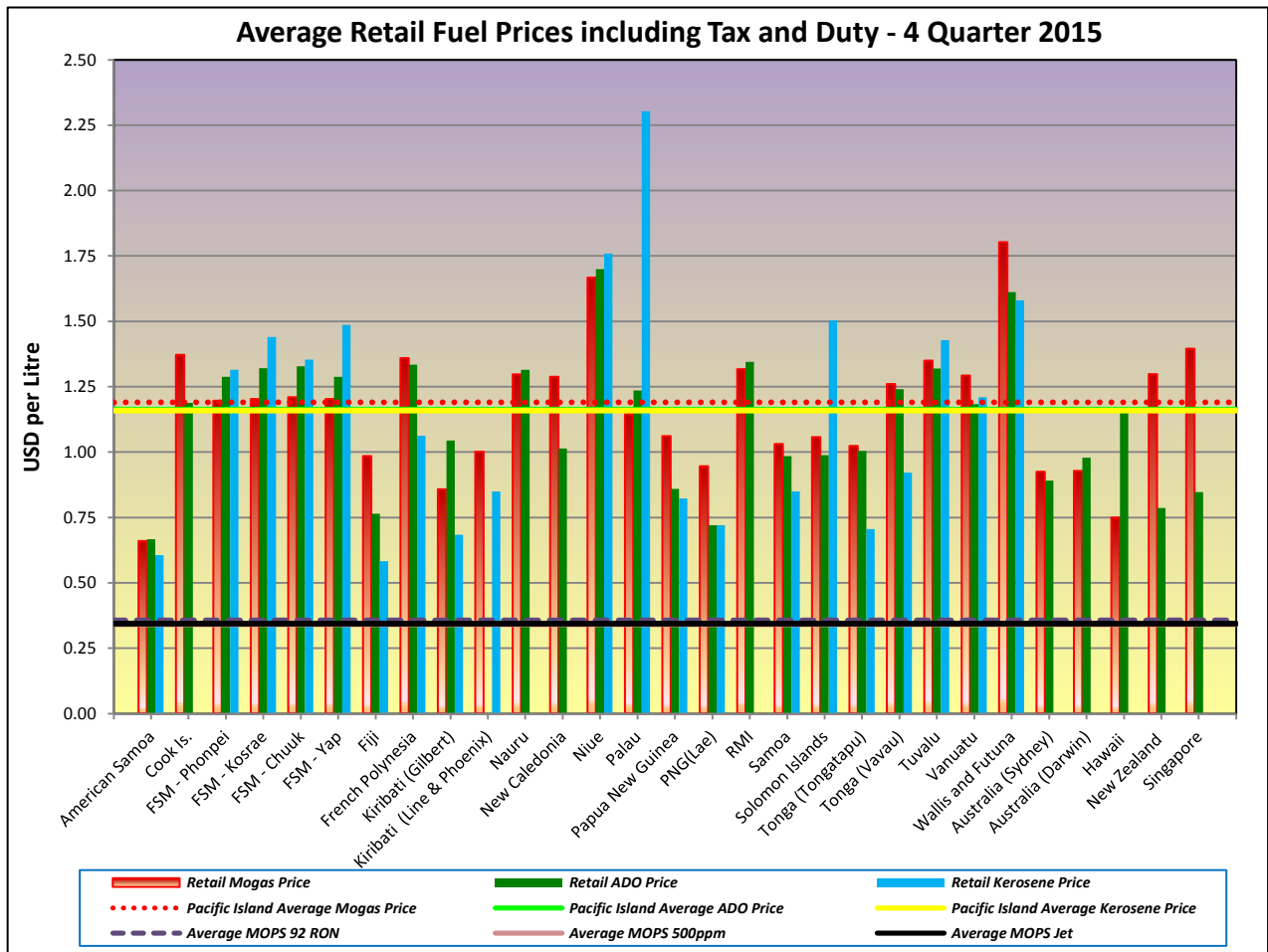
## Covering 4-Quarter 2015 (October–December)

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## 1. PACIFIC FUEL PRICES AT A GLANCE

Figure 1: Regional retail prices including duty and taxes



## 2. KEY OBSERVATIONS – Pacific Fuel Prices

### **Overview**

Overall, PICT retail mogas, diesel, kerosene and LPG prices fell in the fourth quarter 2015 (4Q-2015) compared with the previous quarter average. Underlying international oil prices in 4Q-2015 dropped by US4.12 cents per litre (cpl) to average at US28.22cpl. This decrease will be reflected at pumps in all PICTs in the order of US4cpl. Notably pricing in Cook Is has slightly reduced following their work on redesigning their fuel pricing templates with assistance from SPC's petroleum advisory services.

### **Mogas**

American Samoa had the lowest tax inclusive retail price followed closely by Hawaii and Kiribati (Gilbert). Pre-tax lowest was Sydney (50.75 UScpl), Darwin (51.05 UScpl), American Samoa (56.40UScpl) and Hawaii (57.01 UScpl). Highest pre-tax costs were Niue (142.05 UScpl), Cook Islands (131.93 UScpl) and Tuvalu (130.94 UScpl). American Samoa had the lowest PICT wholesale price followed by PNG, Kiribati (Gilbert) and Fiji. The PICT retail pre-tax 'low-to-high' price gap (American Samoa compared with Wallis & Futuna) for mogas was 84.15 UScpl. Volume weighted, the best performing mogas markets were Fiji, American Samoa, Samoa and Tonga.

### **ADO**

American Samoa and PNG had the lowest tax inclusive retail price followed by Fiji and New Zealand. Pre-tax lowest was Fiji (47.80 UScpl), Sydney (53.21 UScpl), Darwin (55.73 UScpl) and American Samoa (57.14 UScpl). Highest pre-tax costs were RMI (132.89 UScpl) and Niue (130.62 UScpl). PNG had the lowest PICT wholesale price comparable with that of NZ and AUS, followed by NZ, Fiji and American Samoa. The PICT retail pre-tax 'low-to-high' price gap (Fiji compared with RMI) for ADO was 74.18 UScpl. Volume weighted, the best performing ADO markets were Fiji, American Samoa, Samoa and Tonga.

### **Kerosene**

Fiji had the lowest tax inclusive retail kerosene prices followed by American Samoa and Kiribati (Gilbert). Pre-tax lowest was Fiji (58.28pl), American Samoa (59.94) and French Polynesia (60.47 UScpl). PNG had the lowest wholesale kerosene price (48.19 UScpl) followed by Fiji and American Samoa. The highest kerosene prices were in Palau, Niue and Wallis & Futuna. The PICT retail pre-tax 'low-to-high' price gap (Fiji compared with Palau) for kerosene was 170.69 UScpl.

### **LPG**

The lowest retail LPG prices were in Fiji (USD1.34 per kg), closely followed by Tonga and New Caledonia. Palau had the highest LPG price (USD5.51 per kg), a gross margin of USD5.10 per kg over the Saudi Aramco LPG Contract Price. The PICT pre-tax 'low-to-high' price gap (Fiji compared with Palau) for LPG was USD 4.17per kg.

### **Crude oil**

Average Dated Brent crude oil prices decreased by USD6.58bbl or 4.12 UScpl for 4Q-2015 compared with 3Q-2015.

### **General**

- On a volume weighted comparison, American Samoa, Fiji, Samoa and Tonga continue to achieve the best prices for Mogas and ADO.
- The major PICT markets of Papua New Guinea, New Caledonia and French Polynesia all have potential to achieve lower fuel costs based on their market economies of scale.

### 3. MOGAS (UNLEADED PETROL) PRICES

Figure 2: Retail tax inclusive mogas price

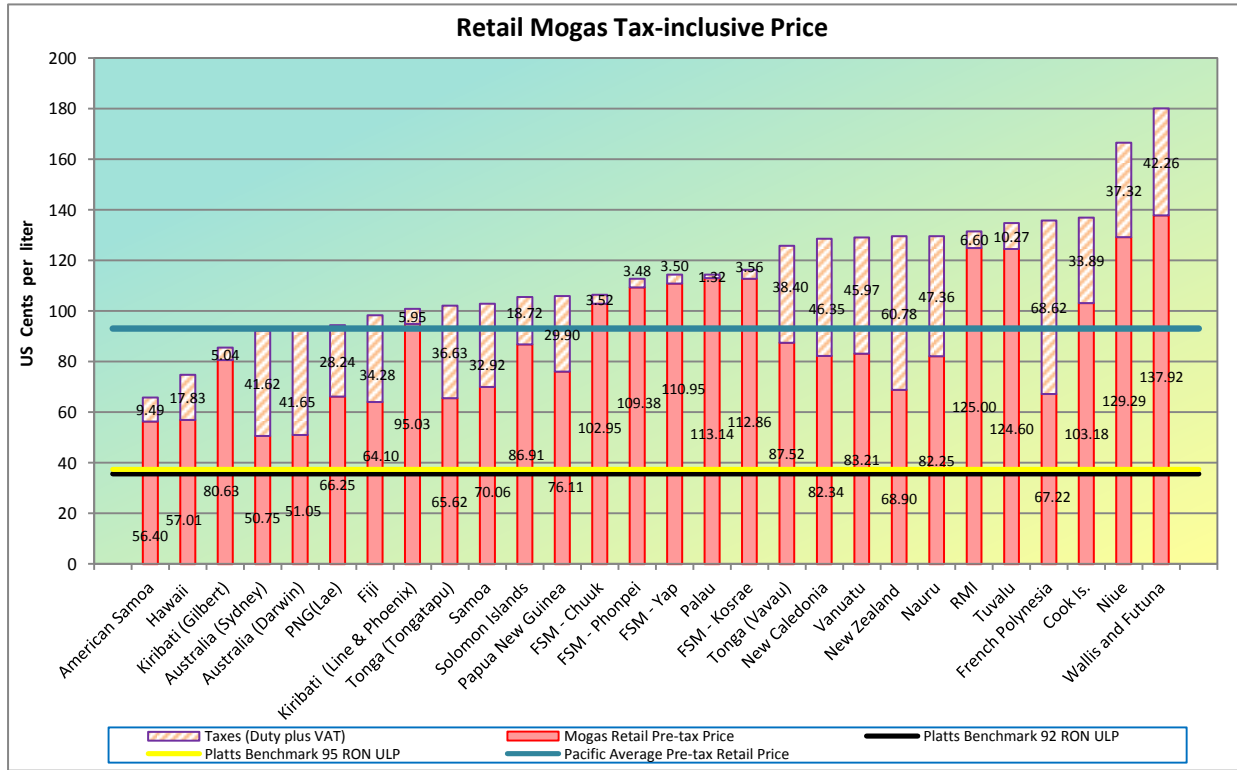


Figure 3: Retail mogas prices sorted by pre-tax cost

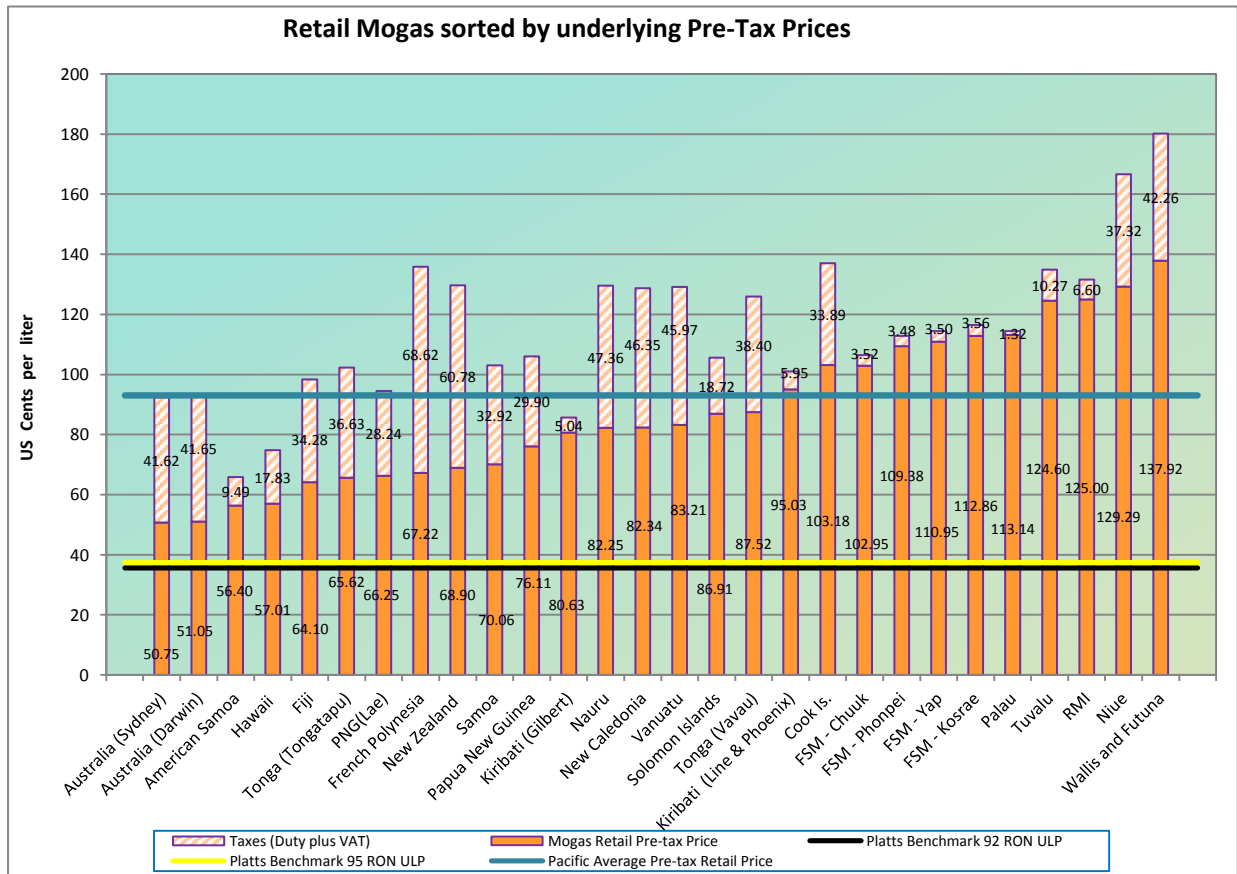


Figure 4: Wholesale mogas prices sorted by pre-tax cost

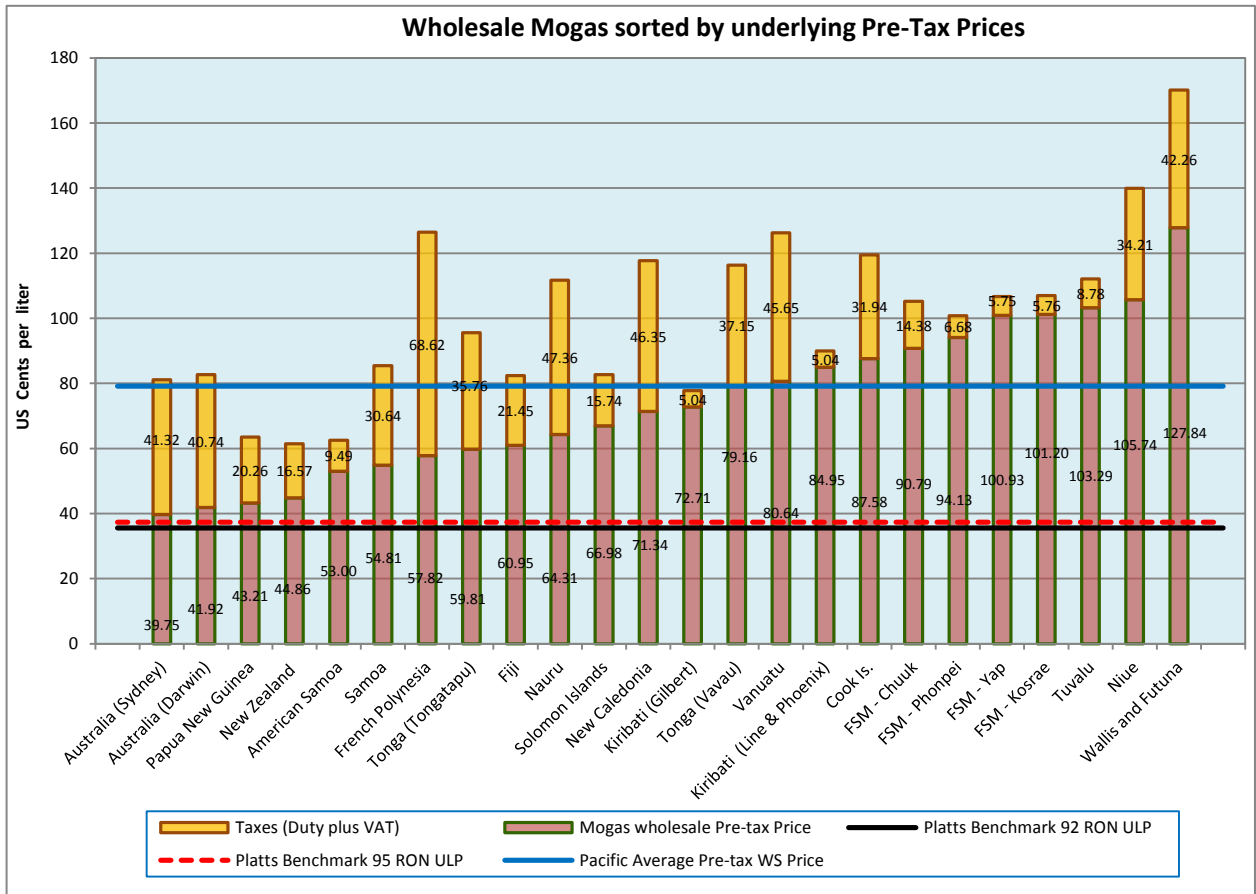


Figure 5: Wholesale and retail Mogas prices (including tax and duty)

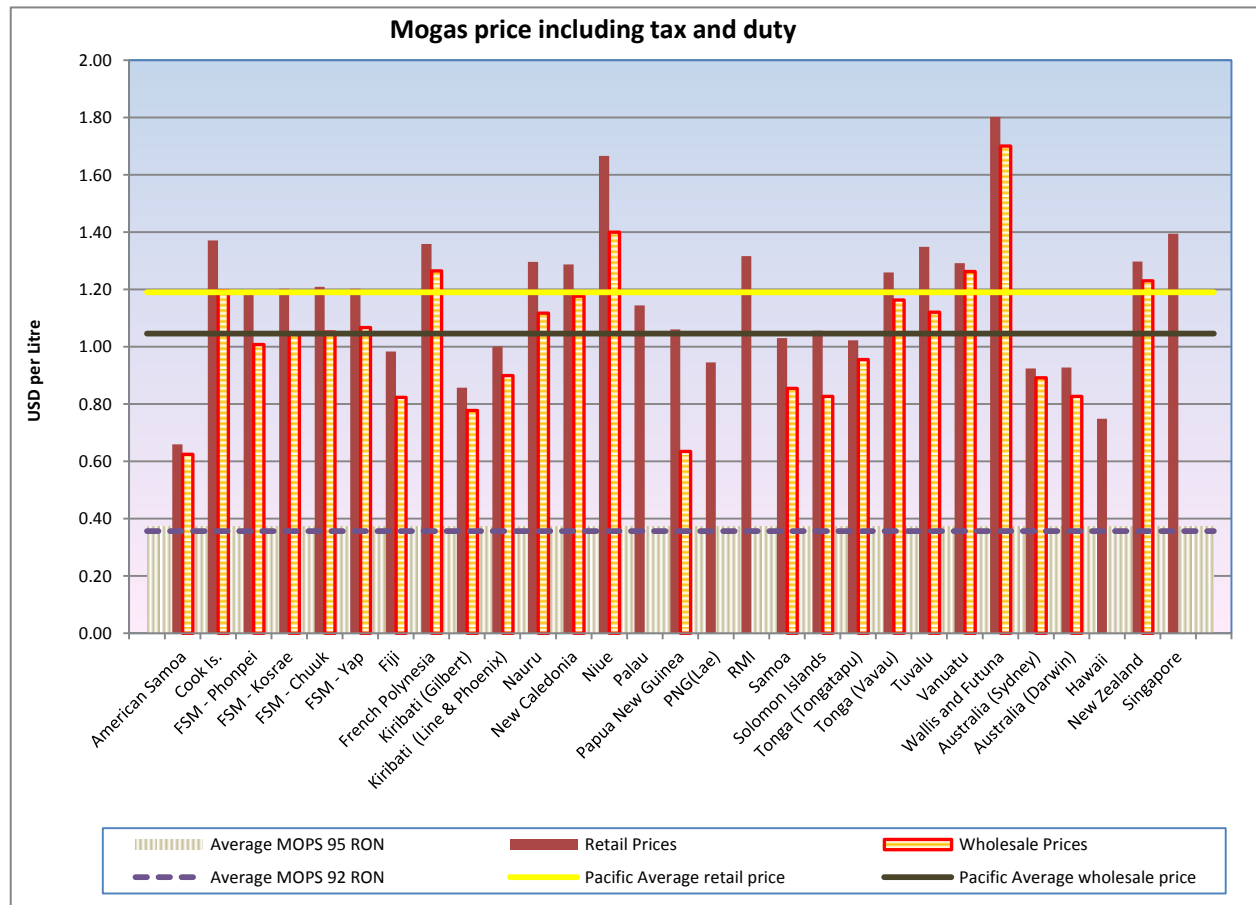
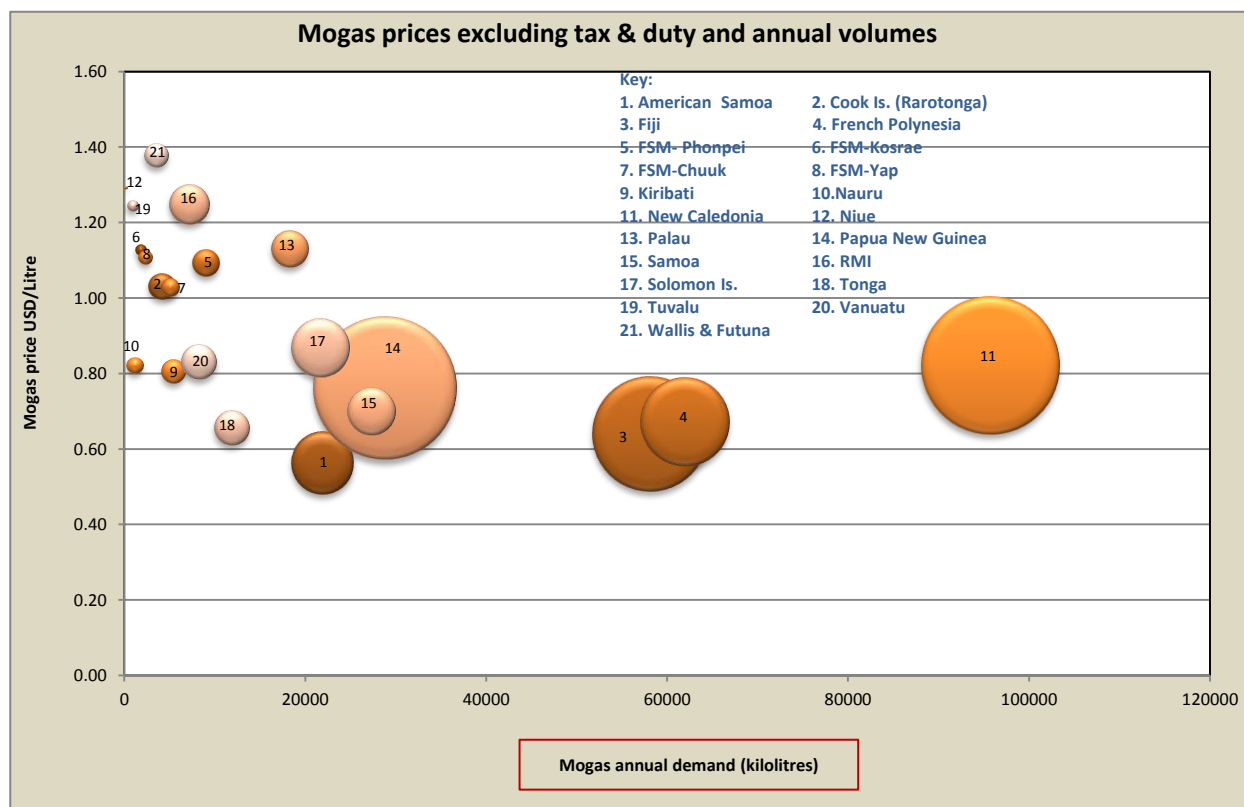


Figure 6: Mogas pre-tax retail prices 2Q-2015 compared by annual volume



\*Note: For figure 6.0 total and mogas volume for New Caledonia is projected over 1995 data and it's an SPC estimate. The centre of the bubble represents the price.

### Key observations – Mogas

- Most PICTs import 92 RON mogas, however Niue, Cook Islands, New Caledonia, Vanuatu and Wallis and Futuna import 95 RON, which has a higher cost than 92 RON. This goes some way to explain variations between PICTs.
- Regulated PICT markets tend to have lower retail prices than non-regulated markets.
- The Pacific-wide retail average pre and after tax retail price for mogas was USD 0.93/litre and USD 1.19/litre respectively.
- Average pre and after tax wholesale price for mogas was USD 0.79/litre and USD 1.05/litre.
- Pre-tax wholesale price was lowest in Sydney (UScpl 39.75), Darwin (UScpl 41.92), Papua New Guinea (UScpl 43.21), New Zealand (UScpl 44.86) and American Samoa (UScpl 53.0).
- The PICT pre-tax low to high wholesale price gap (PNG compared with Wallis & Futuna) for mogas was 84.63 UScpl.
- Average MOPS for mogas 92 and 95 RON during the October-December period was USD0.36/l and USD 0.37/l respectively.
- Pre-tax wholesale margins above the Platts average mogas MOPS price (USD 0.36/l) for the period fell in the range of USD/l 0.08 (American Samoa) to USD 0.92 USD/l (Wallis & Futuna).
- Mogas related retail tax rates between PICTs range from 1.32UScpl (Palau) to 68.62 UScpl (French Polynesia).
- Mogas related wholesale tax rates between PICTs range from 5.04UScpl (Kiribati) to 68.62 UScpl (French Polynesia).

## 4. AUTOMOTIVE DIESEL PRICES

Figure 7: Retail tax inclusive diesel prices

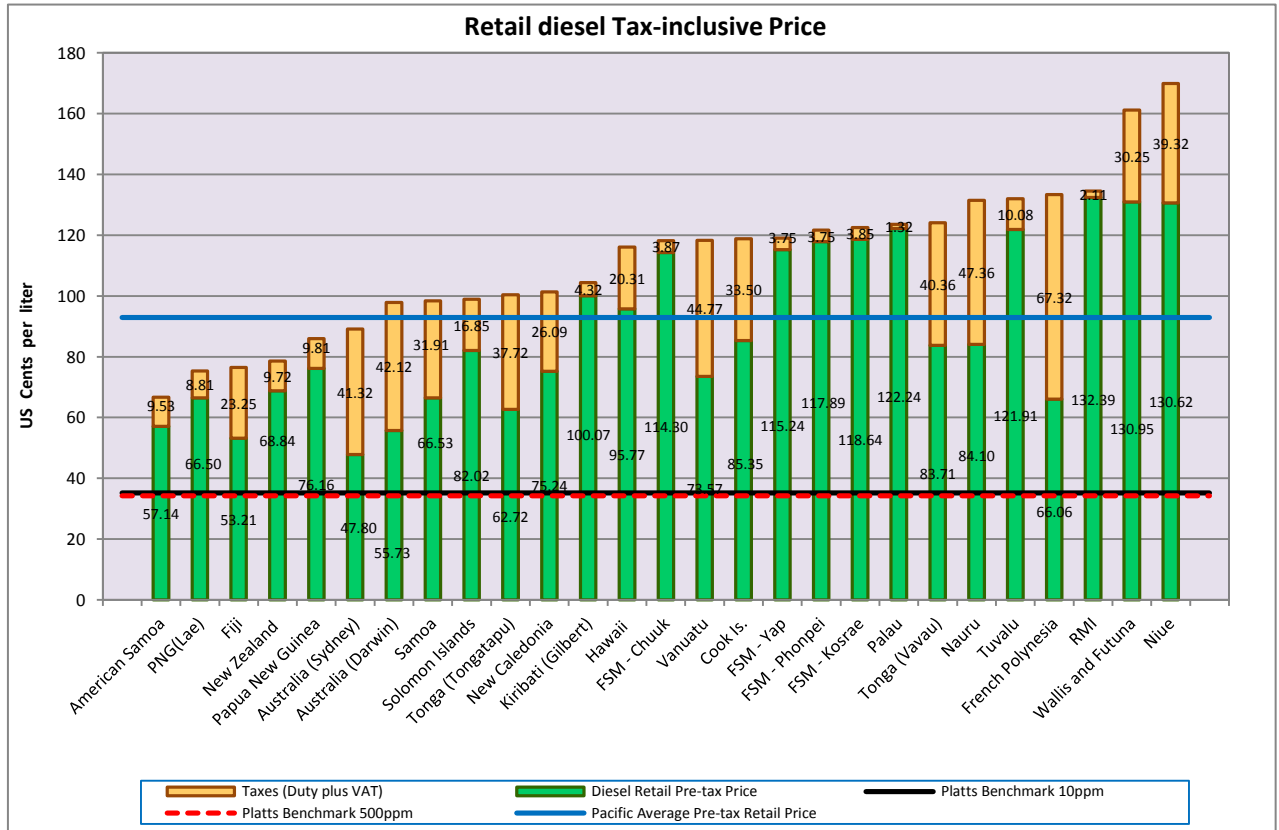


Figure 8: Retail diesel prices sorted by pre-tax cost

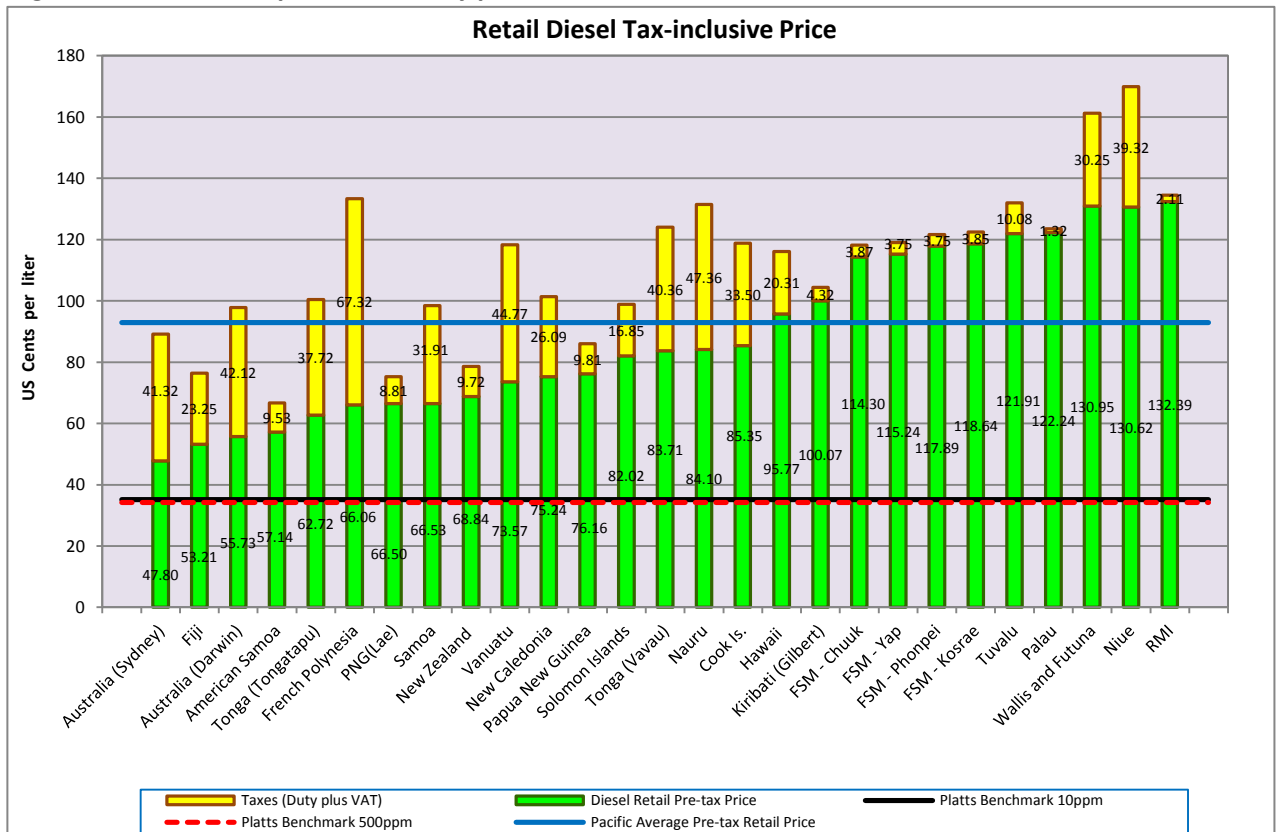


Figure 9: Wholesale diesel prices sorted by pre-tax cost

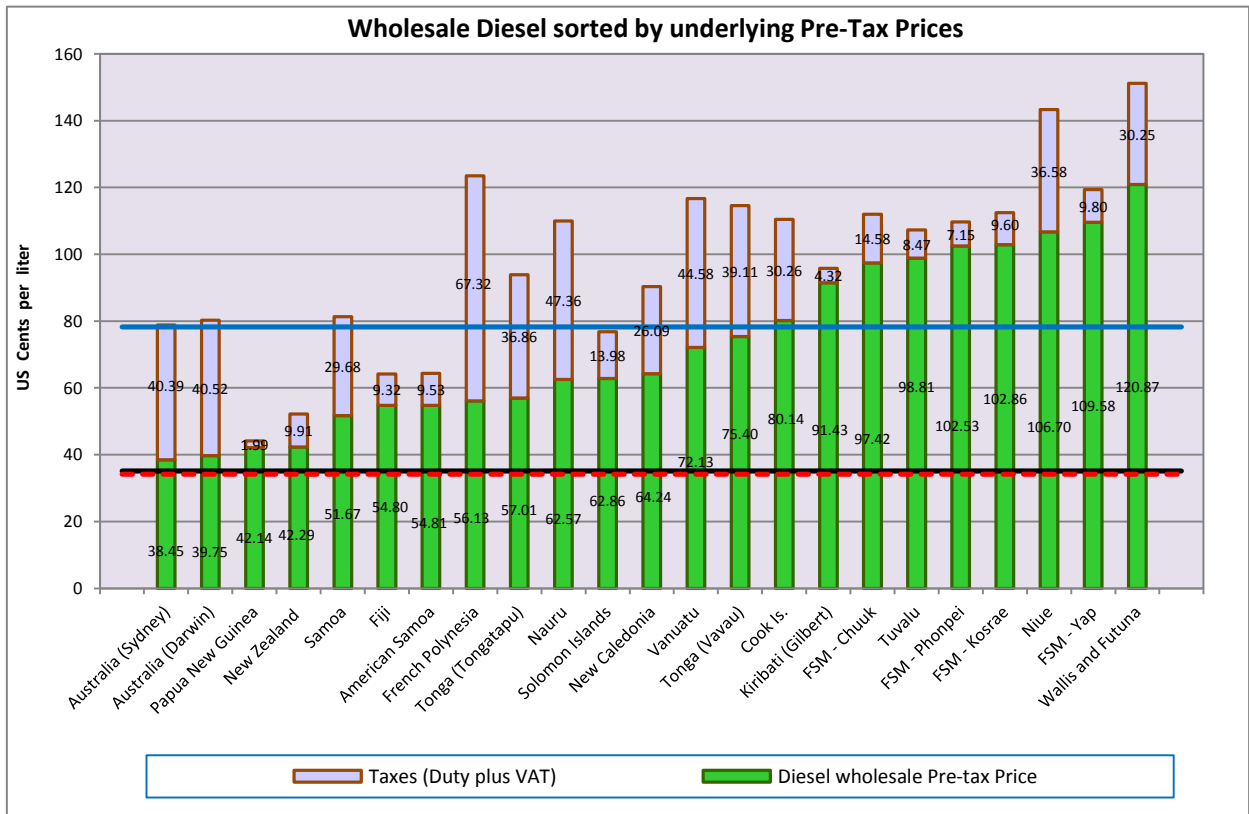


Figure 10: Regional prices of diesel (including tax and duty)

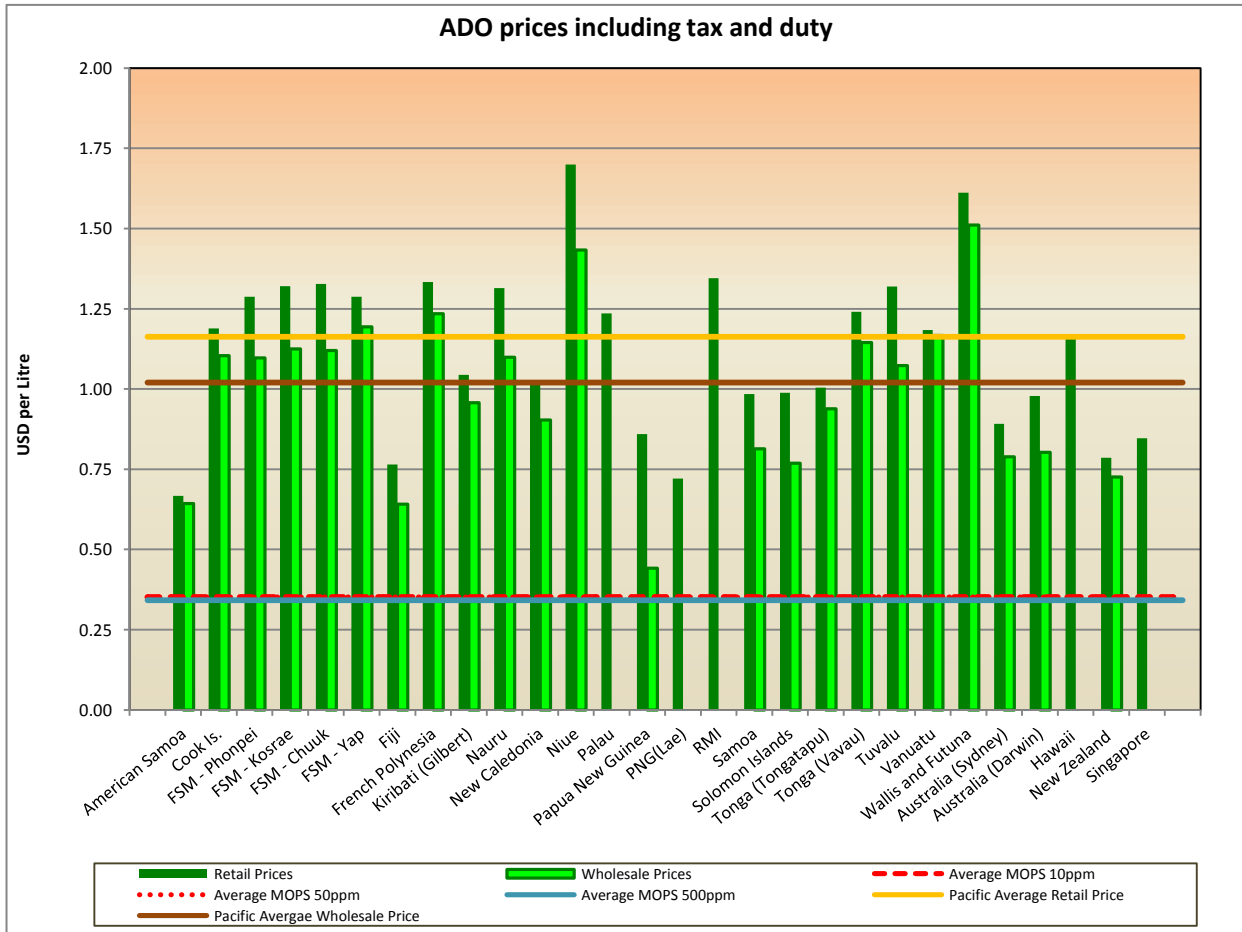
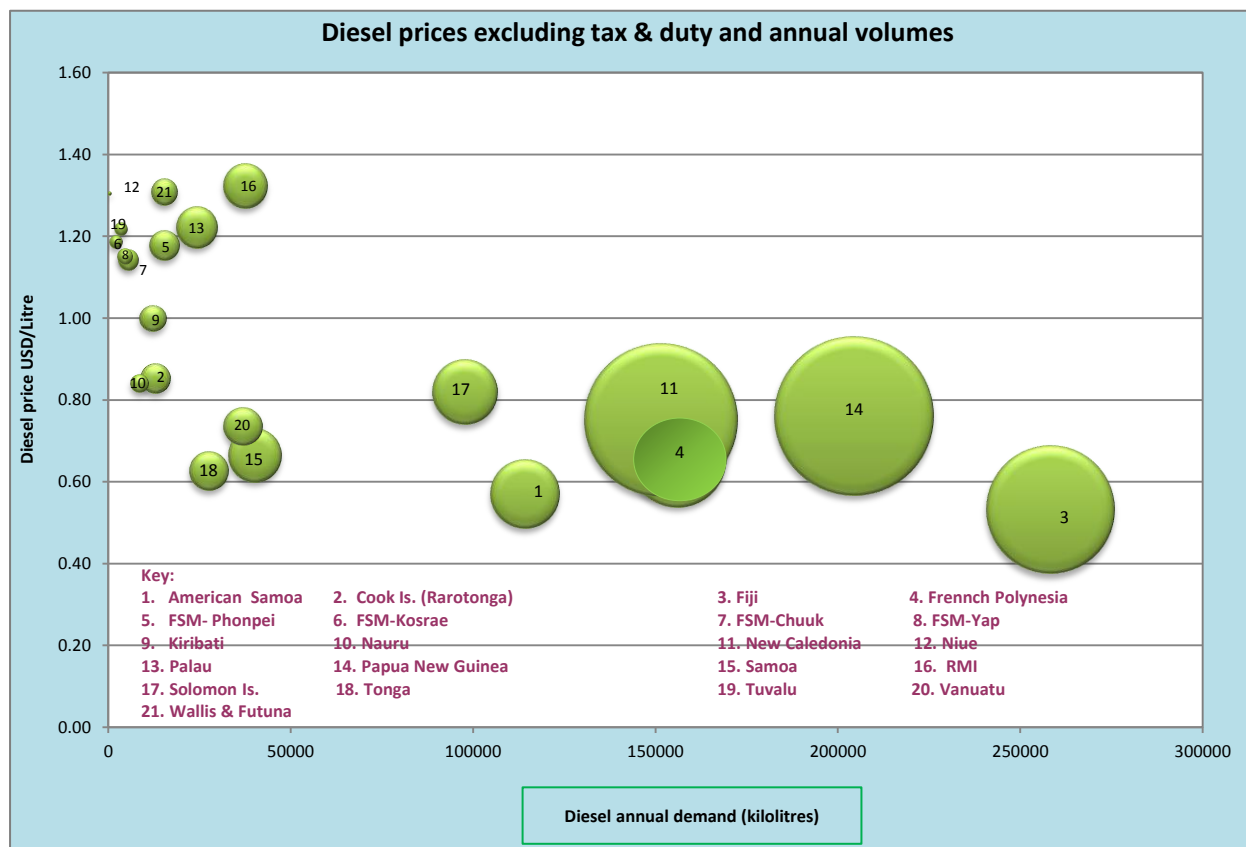


Figure 11: Diesel pre-tax retail prices 4Q-2015 compared by annual volume



\*Note: For figure 11, total and diesel volume for New Caledonia is projected forward based on 1995 data and is an SPC estimate. The centre of the bubble represents the price.

### Key observations – diesel fuel

- Pre-tax and duty, Fiji, Sydney & Darwin (Australia) has the lowest retail ADO costs and prices, closely followed by American Samoa and Tongatapu. Palau imposes the lowest amount of tax and duty however is mid-ranking in terms of comparative retail sales price.
- The majority of PICTs import 500ppm Sulphur (S) ADO for land transport. Cook Islands and Palau have specifications of 50 ppmS. American Samoa, New Caledonia, Niue, Wallis and Futuna and Vanuatu import 10ppm diesel for automotive use, factors that contribute to price variations between PICTs.
- The Pacific-wide average pre and after tax retail price for ADO was USD 0.93/litre and USD 1.16/litre.
- Papua New Guinea had the lowest tax inclusive wholesale prices followed by New Zealand and Fiji. Pre-tax wholesale price was lowest in Sydney (UScpl 38.45), Darwin (UScpl 39.75), PNG (UScpl 42.14) and New Zealand (UScpl 42.29).
- The PICT pre-tax low to high wholesale price gap (PNG compared with Wallis & Futuna) for ADO was 78.73UScpl.
- The Pacific-wide average pre and post-tax wholesale price for ADO was USD0.78/litre and USD 1.02/litre.
- Average MOPS for gasoil 10ppm and 500ppm during the October-December period was USD 0.35/l and USD 0.34/l respectively.
- Pre-tax retail margins above the Platts average ADO MOPS price (USD0.34) for the period fell in the range of USD 0.24 (Fiji) to USD 0.98 (RMI).
- ADO retail tax rates between PICTs range from 1.32 UScpl (Palau) to 67.32 UScpl (French Polynesia).
- ADO related wholesale tax rates between PICTs range from 1.99UScpl (Papua New Guinea) to 67.32UScpl (French Polynesia).



## 5. KEROSENE PRICES

Figure 12: Retail tax- inclusive kerosene prices

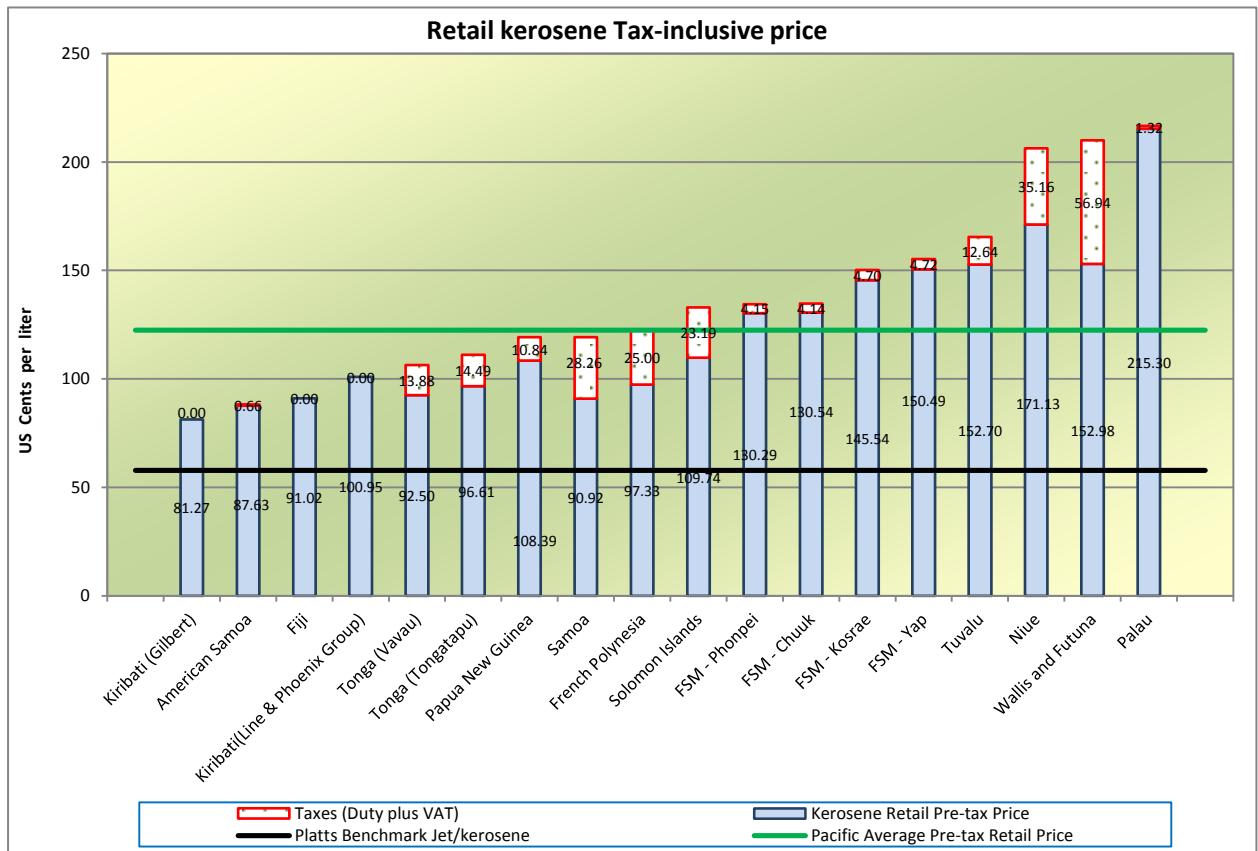


Figure 13: Retail kerosene prices sorted by underlying pre-tax cost

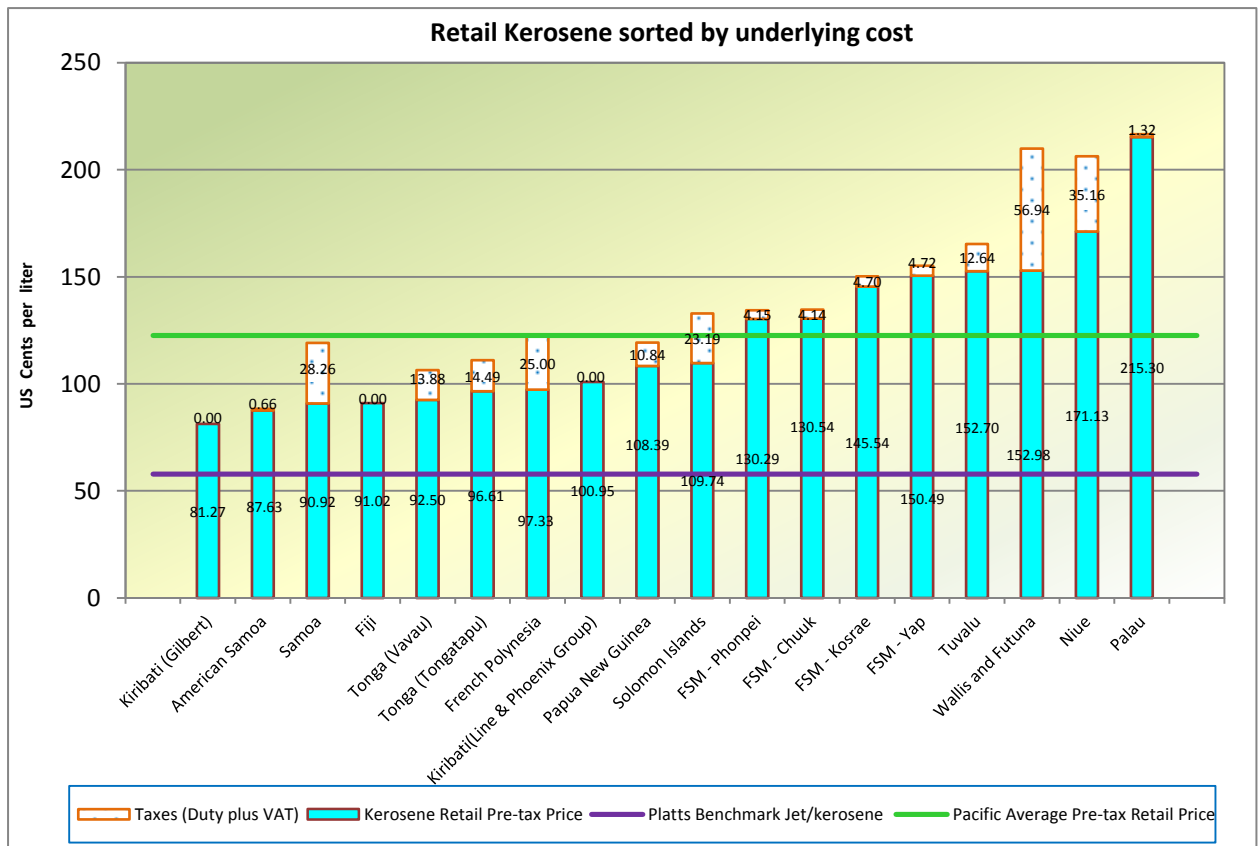


Figure 14: Wholesale kerosene prices sorted by underlying pre-tax cost

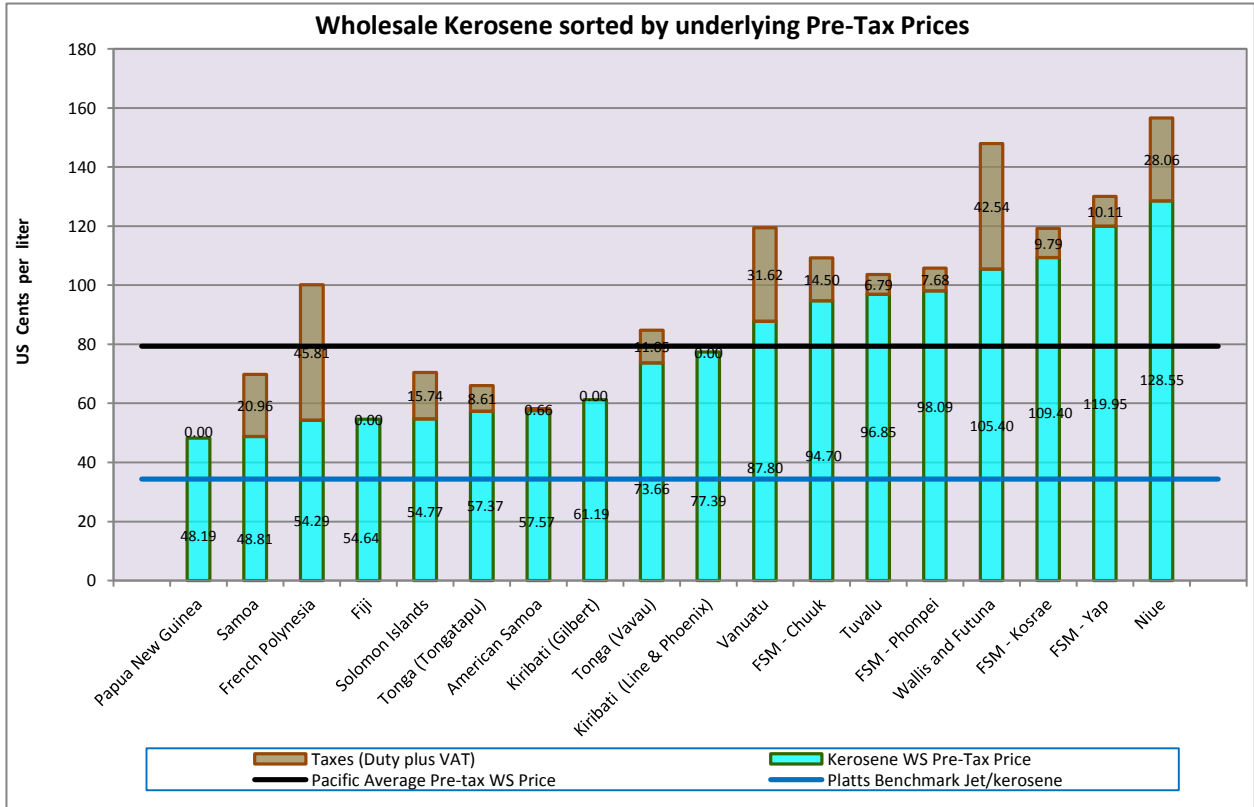
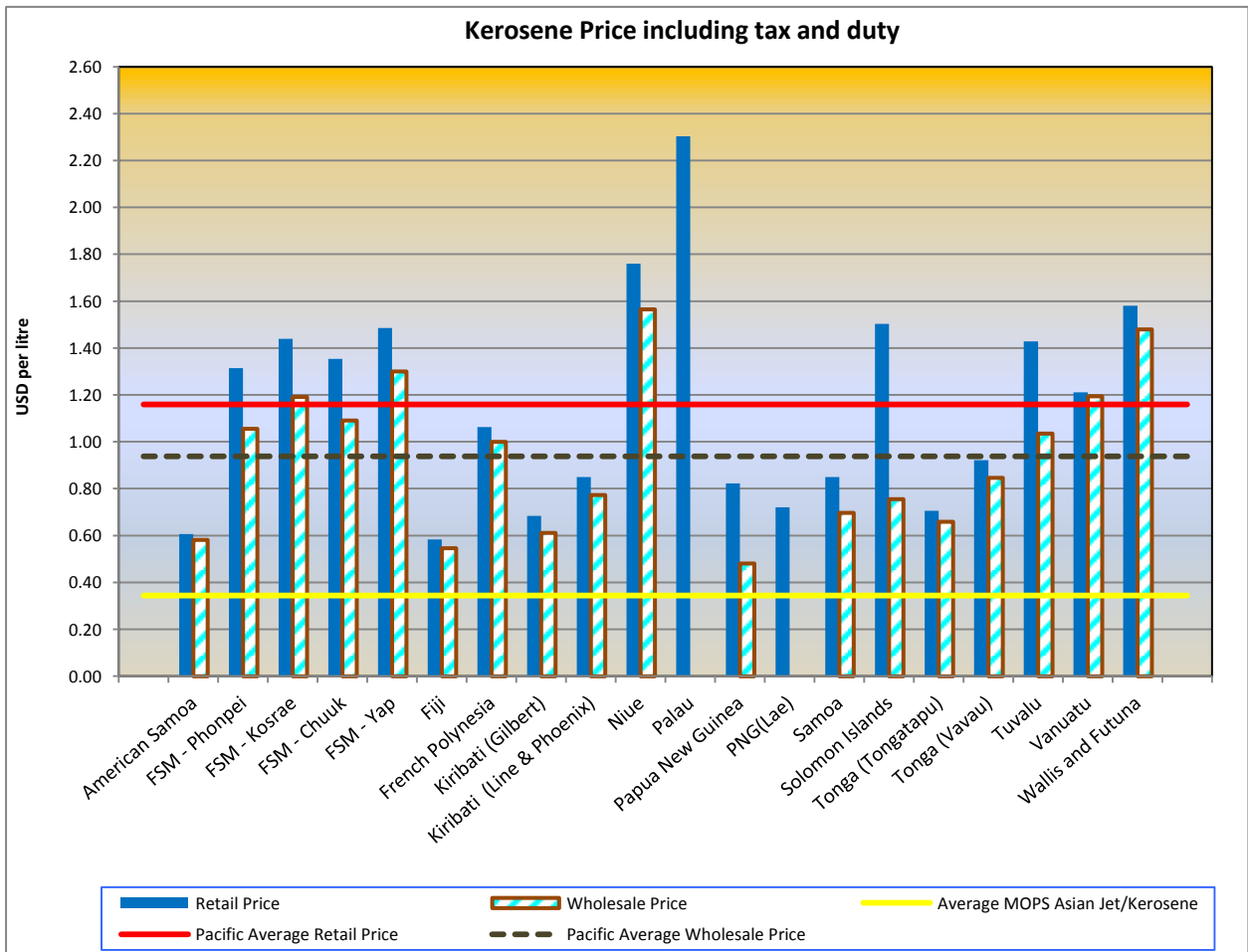


Figure 15: Wholesale and retail prices of kerosene (including tax and duty)



### Key observations – Kerosene

- Fiji has the lowest retail kerosene prices while Papua New Guinea had the lowest wholesale prices. Highest prices are found in Palau and Niue.
- The Pacific-wide average pre and after tax retail price for kerosene was USD 0.99/litre and USD 1.16/litre respectively.
- Average MOPS for Asian jet fuel (the main end-use for kerosene) during the October-December period was USD 0.34/litre.
- Papua New Guinea had the lowest tax inclusive wholesale prices followed by Fiji and American Samoa.
- Pre-tax wholesale price was lowest in Papua New Guinea (UScpl 48.19), Samoa (UScpl 48.81) and French Polynesia (UScpl 54.29).
- The PICT pre-tax low to high wholesale price gap (Papua New Guinea compared with Niue) for kerosene was 80.36 UScpl.
- Kerosene related retail tax rates between PICTs range from zero (Kiribati and Fiji) to 45.81 UScpl (French Polynesia).
- Kerosene related wholesale tax rates between PICTs range from zero (Kiribati, Papua New Guinea and Fiji) to 45.81 UScpl (French Polynesia).

## 6. LIQUEFIED PETROLEUM GAS (LPG) PRICES

**Figure 16: Saudi Contract Price (CP) Butane and Propane Price vs Dated Brent (Crude Oil)**

The international benchmark for the cost of LPG in the Asia Pacific region is the Saudi Aramco Contract Price, also known as the ‘Saudi CP’ increased in the fourth quarter. Saudi CP for butane and propane for the quarter averaged at USD425 and USD405 per Metric Tonne respectively. The price increase was due to draw down of inventories due to increase in consumption during winter months.

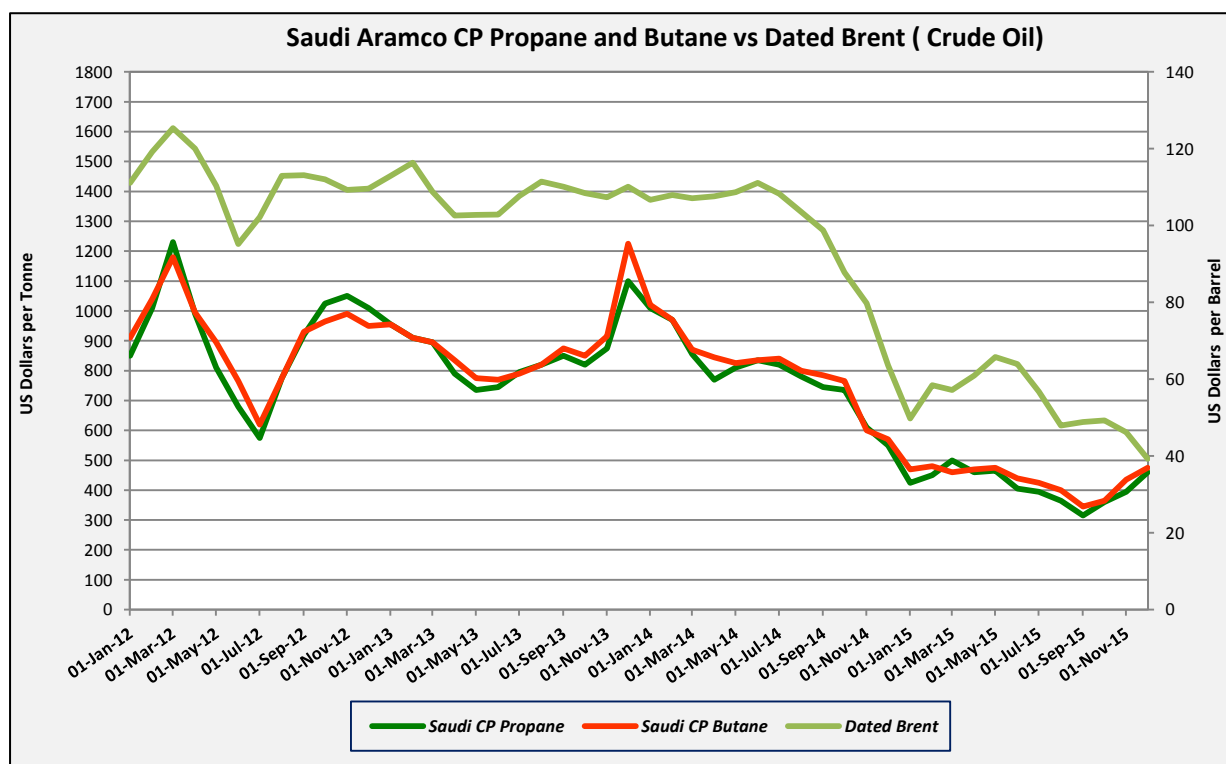
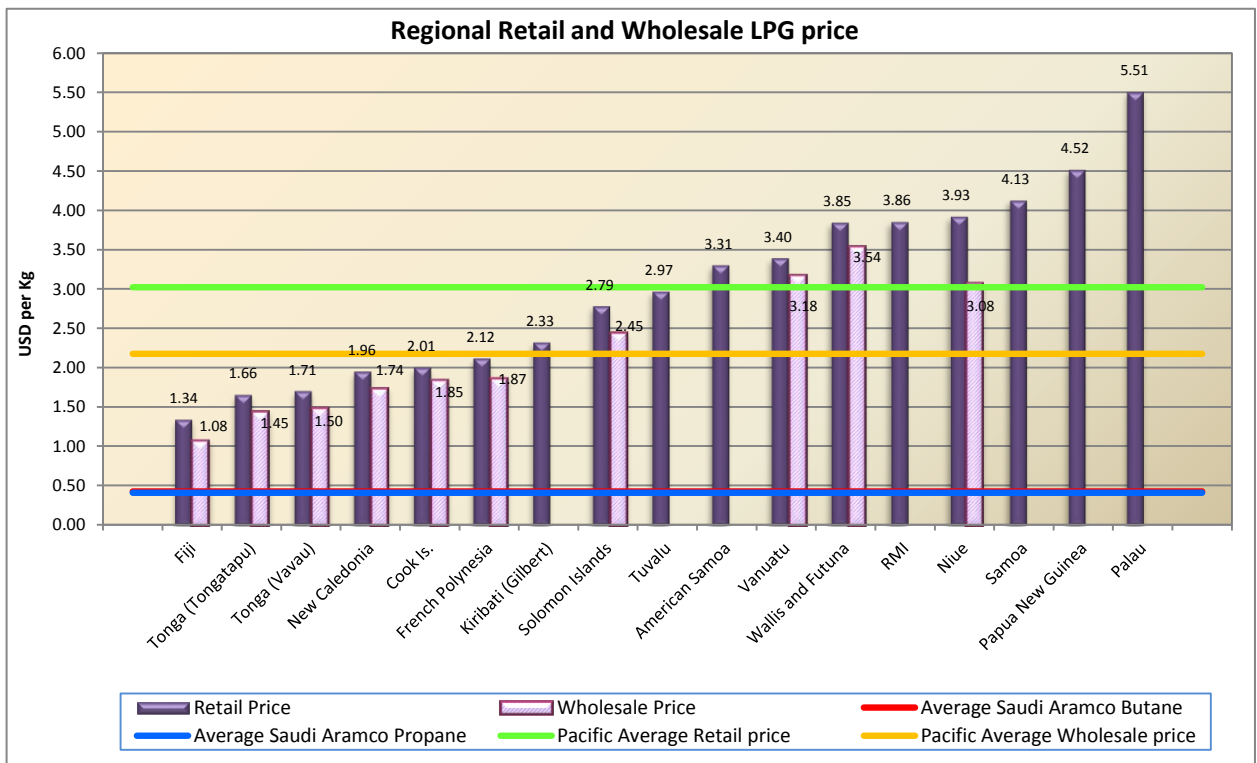


Figure 17: Regional prices of LPG (including tax and duty)

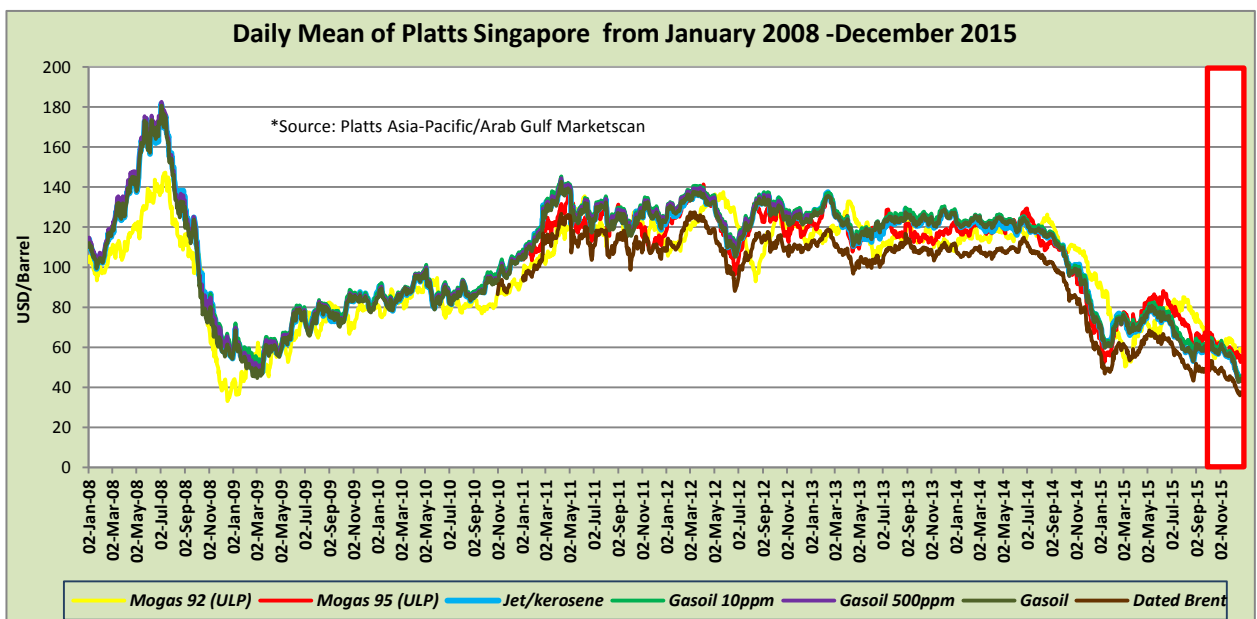


**Key observations LPG**

- Between October-December 2015 Fiji has the lowest LPG retail and wholesale prices at USD 1.45/Kg and USD 1.17/Kg respectively.
- Palau, Papua New Guinea, Samoa, Niue and RMI had the highest retail LPG prices which are all more than double that of Fiji.
- There is significant potential to reduce regional LPG prices.

**7. INTERNATIONAL MARKET TRENDS**

Figure 18: Comparison – Singapore gasoline, jet fuel/kerosene, diesel and Dated Brent.



### Oil price fell to its lowest levels since 2008 in 4Q15.

Dated Brent reached its cheapest level since the 2008-2009 Great Recession during the fourth quarter of 2015. Crude oil tumbled approximately 60 percentage compared to 2014 as global supply outpaced demand.

In comparison to the third quarter of 2015, the price of Dated Brent in the fourth quarter 2015 decreased by USD6.56/bbl from USD51.42/bbl to USD44.86/bbl.

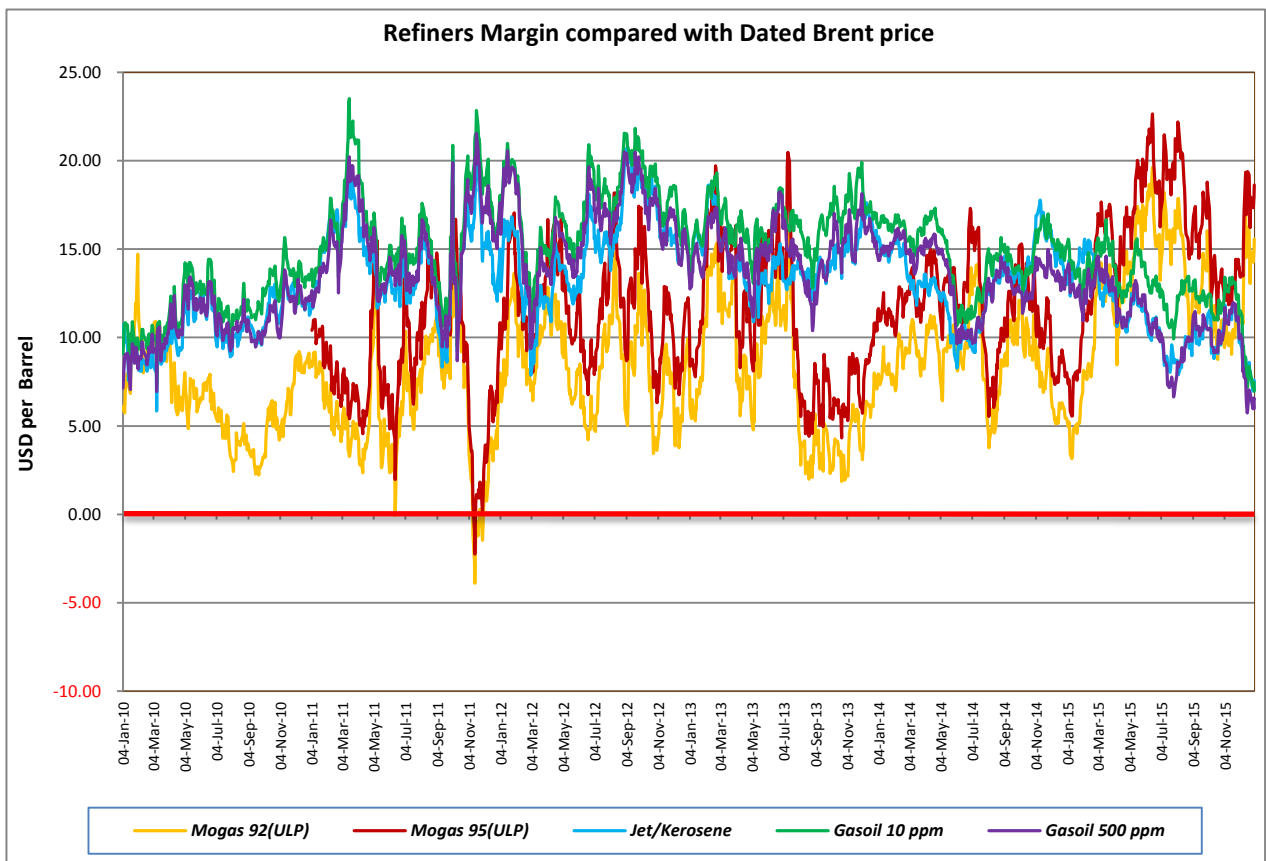
### Singapore Fuel Prices

In 4Q-2015, Singapore free on board (FOB) prices for Mogas 92 decreased by 13.77%, Kerosene prices by 10.09% and 10ppm and 500ppm Diesel by 12.01 and 10.49 percent respectively. FOB fuel price comparison for 3Q15 vs 4Q15 is as follows:

	3Q15 Average (UScpl)	4Q15 Average (UScpl)	Difference (UScpl)
<b>Gasoline 92</b>	65.65	56.61	-9.04
<b>Diesel 500ppm</b>	60.76	54.39	-6.37
<b>Kerosene</b>	60.85	54.72	-6.14
<b>Dated Brent</b>	51.42	44.86	-6.56

In comparison to third quarter of 2015, the price of Dated Brent crude in the fourth quarter decreased (in USD/bbl terms) by 6.56 from 51.42 to 44.86. PICTs are part of the Asia Pacific fuel market with Singapore the recognised regional trading market as well as a petroleum refining and distribution centre. The pricing benchmarks for PICT fuel markets are traded Singapore prices for diesel (gasoil) with maximum 10, 50 and 500 ppm Sulphur, gasoline (92 and 95 RON) and jet/kerosene.

Figure 19: Difference between market prices



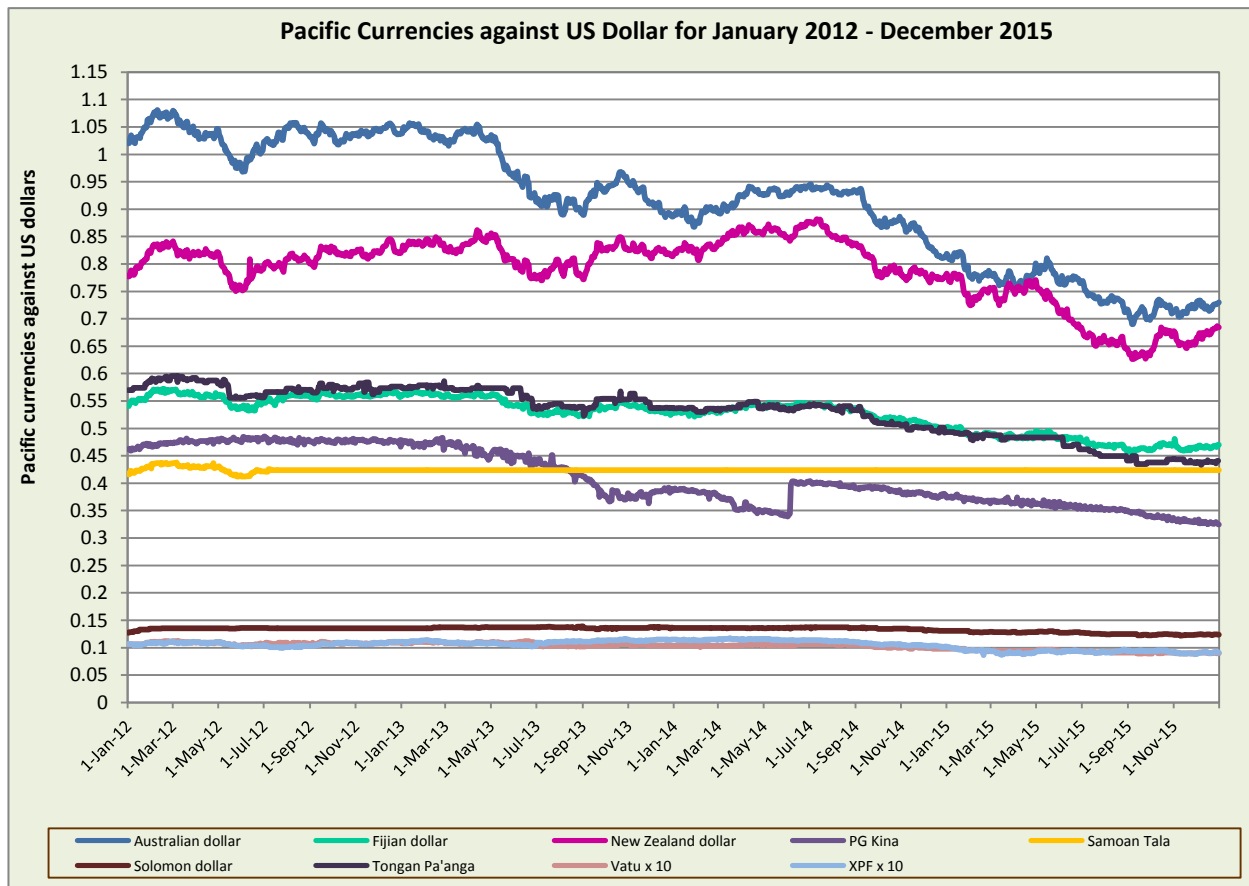
### Observations – refiners margin

- Observed refining margins indicate that regional Asian margins remained healthy on back of stronger regional demand for gasoline for transportation.
- Asian refining margins during the period October –December strengthened on the back of result of higher winter seasonal demand for heating fuels.

## 8. EXCHANGE RATES

The PICT currency - USD exchange rate is an important factor directly influencing retail fuel prices because the international benchmark prices of refined petroleum products are quoted in US dollars.

Figure 20: Pacific Currencies against USD exchange rate



While the Australian and New Zealand dollar appreciated against the US dollar during the fourth quarter all other major PICT currencies depreciated with the Samoan tala remaining relatively stable. This was one of the factors that resulted in PICT retail fuel prices to increase.

## 9. PICT FUEL PRICING METHODOLOGIES

- Samoa, Tonga, Papua New Guinea, Wallis and Futuna, New Caledonia, Vanuatu and Solomon Islands carry out price reviews on a monthly basis.
- Fiji reviews petroleum product price on a quarterly basis. Price change is based on MOPS prices of previous quarter.
- American Samoa reviews prices on a fortnightly basis.
- Niue and Cook Islands price changes are carried out on an ad hoc basis. Price change is mostly influenced by either a major surge or fall in international market prices.
- Kiribati has held its fuel prices constant since 2012.

### Price data sources

- Australian data is sourced from <http://www.aip.com.au/>
- NZ data is sourced from <http://www.med.govt.nz/>
- Hawaii prices are calculated using US average refiners wholesale prices sourced from <http://www.eia.gov/> plus Hawaii taxes for diesel and Mogas which was sourced from <http://www.api.org/>
- Singapore data is sourced from [www.facebook.com/PetrolWatchSingapore](http://www.facebook.com/PetrolWatchSingapore)
- Data for Saudi Aramco LPG prices was adapted from <http://gasenergyaustralia.asn.au/>
- Figures 14 & 15 are generated using daily MOPS data sourced from Platts Asia-Pacific/Arab Gulf Marketscan.
- Prices for diesel, gasoline and jet/kerosene prices are provided by Platts (The McGraw-Hill Companies, Inc.) under subscription.

### Fuel volumes

- Graphs referring to fuel volumes plot the Quarter average prices against the annual volume demand for mogas and diesel of each PICT.
- Annual volumes used in this report are based on 2009 annual market volumes as collected and published by SPC Economic Development Division unless otherwise indicated.
- For American Samoa, French Polynesia, Palau and Wallis and Futuna, 2012 volume is used. For Guam, 2013 volume as published by the Guam Department of Energy was used but does not include volumes allocated for military use.
- New Caledonia fuel volume is projected using 1995 data and is an SPC estimate.
- The size of the ball in the volume weighted price graphs (figures 6 and 11) represents the annual total volume of all fuels within the PICT, which is an indicator of the import economies of scale available. (NB. PNG total volume includes refinery production).

## 10. GLOSSARY AND CONVERSIONS

### Abbreviations and definition of key terms

ADO	automotive diesel oil or diesel fuel
After-tax price	prices including tax and duty
bbl	barrel (of oil), approximately 159 litres
Cpl	cents per litre
DPK	dual purpose kerosene (i.e. jet fuel and domestic use)
FOB	free on board
Gasoil	refinery designation of diesel fuel
kl	kilolitres (thousand litres)
Mogas	motor gasoline – normally unleaded
MOPS	Mean of Platts Singapore
MR	Medium Range tankers, generally 20-30,000 metric tonnes
Pacific-wide	All surveyed Pacific Island countries (excluding Australia and New Zealand)
ppm	parts per million
Retail price	fuel price at retail/service stations, also called pump price
Pre-Tax price	price excluding tax and duty
Pump price	refer to retail price
RON	research octane number
S	Sulfur content (usually in diesel fuel)
ULP	unleaded petrol
USD/bbl	US dollars per barrel
USD/l	US dollars per litre

### Conversions

Litres/USG	3.785
Litres/BBL	159
USG/BBL	42

Note: A more detailed petroleum glossary can be accessed from the PRDR website:

<http://prdrse4all.spc.int/production/node/1523>

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