Research Brief on Energy

Office of Senator Win Gatchalian

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Version 1

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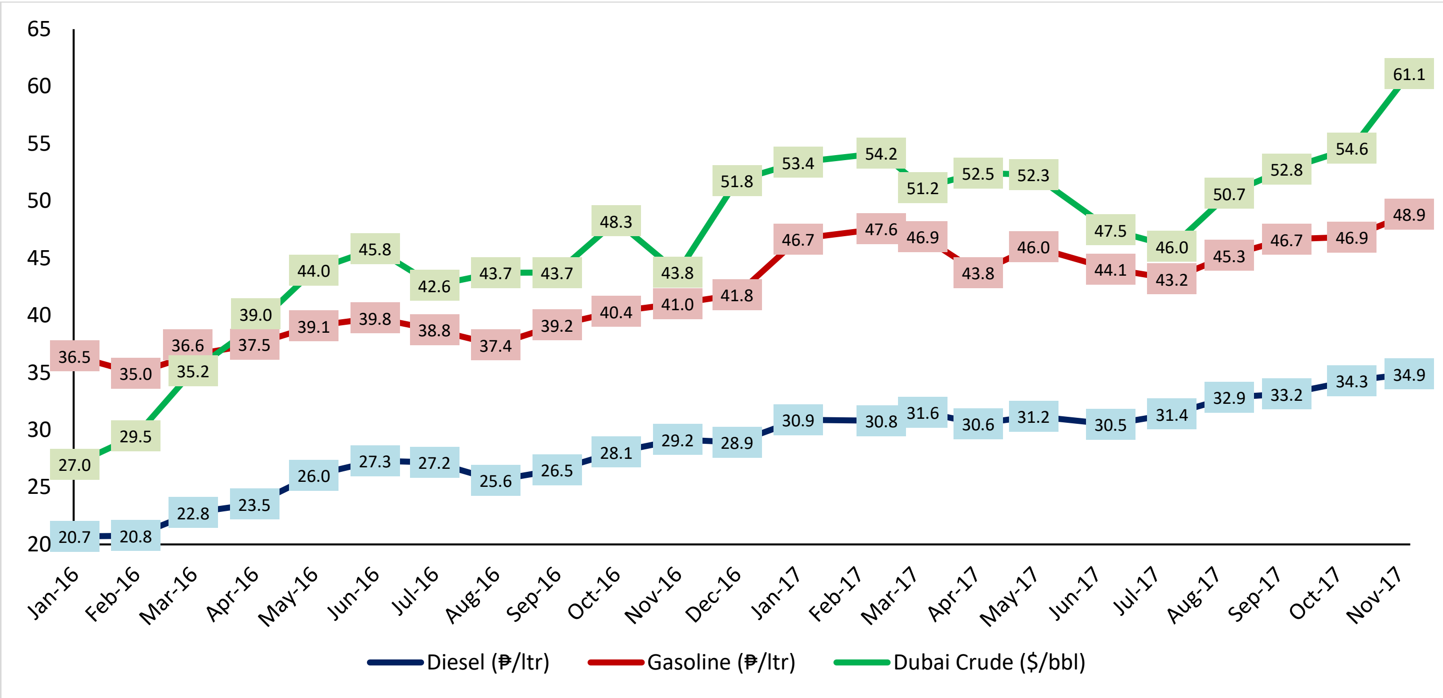
The Impact of TRAIN on Gasoline and Diesel Prices

Current Gasoline, Diesel, and Dubai Crude Prices

Figure 1: Gasoline (₱/ltr), Diesel (₱/ltr), and Dubai Crude ($/bbl) Prices



*As of November 8,2017
Source: DOE, Oilprice.com, World Bank

Table 1: Gasoline (₱/ltr), Diesel (₱/ltr), and Dubai Crude ($/bbl) Prices

Product	2016				2017			
	Jan-16	Dec-16	Increase 2016	% Increase 2016	Jan-17	As of Nov-8-17	Increase 2017	% Increase 2017
Diesel (₱/ltr)	20.7	28.9	₱8.2/ltr	39.6%	30.9	34.9	₱4.0/ltr	12.94%
Gasoline (₱/ltr)	27.0	41.8	₱14.8/ltr	54.8%	46.68	48.85	₱2.2/ltr	4.65%
Dubai Crude ($/bbl)	36.5	51.8	$15.3/bbl	41.9%	53.37	61.14	$7.8/bbl	14.56%

Source: DOE, Oilprice.com, World Bank

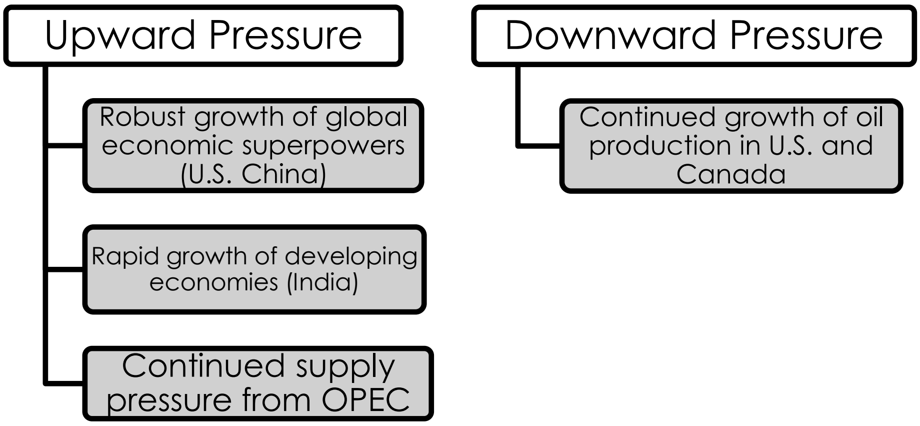
- Figure 1 and Table 1 shows the movement of local and international oil prices for 2017. Dubai crude hovered at the $50/bbl level for the most part of 2017 until a sudden spike in crude prices in the early part of November. Effectively, the price of Dubai crude is 14.56% higher than its price level at the start of the year
- Since the Philippines imports most of its oil, local diesel and gasoline prices also went up from January to November 2017. Diesel price is up 12.94% while gasoline price is higher by just 4.65% from their January levels.

Oil Price Analysis for 2017

Primary Factors

- **During the first half of 2017, oil price forecasts from industry analysts suggested that oil price indices were poised to decrease.** Analysts forecasted decreases because of the following reasons:
  - The initial supply crunch induced by the Organization of Petroleum Exporting Countries (OPEC) was not perceived to have rebalanced markets in favor of suppliers
  - The OPEC does not have the capacity to maintain a supply crunch.
    - Analysts argued that the temptation for OPEC members to renege becomes increasingly difficult to fend off the longer the supply crunch lasts.
    - Analysts further argued that should the OPEC deal fail to elicit price increases, the incentive to renege becomes even stronger – this can be viewed to be especially true for countries that are hugely reliant on oil exports for revenues.
  - Shale oil production from the U.S. increased and was projected to increase over both the short-term and the medium-term.
- **During the third quarter of 2017, however, industry analysts reversed their initial analyses.** Analysts forecasted increases because of the following reasons:
  - The projected increase in the global supply of oil is expected to be outpaced by the projected increase in the global demand of oil.
  - The surge in the global demand of oil – as evidenced by the marked increase of the rate at which global inventories were being drawn, appeared to have emboldened the OPEC. Recent reports indicate that OPEC is poised to extend its cuts deep into 2018.
  - The projected increase in U.S. shale oil production was tapered significantly. Depressed and decreasing oil prices and oil price forecasts have dampened investment appetite for oil projects in recent years. The depressed investment demand is starting to manifest in the form of slower-than-expected production growth.
- **The interplay of global oil supply and global oil demand is viewed to have shifted in recent months. This can be viewed to have been induced by the following factors:**
  - **The (post-recovery) economic upswing in Western Economies such as the U.S.** The U.S. economy has exhibited robust growth in recent years and is poised to maintain or even build on its present momentum.
    - The proposed tax cuts of the Trump administration are expected to further drive economic growth in the U.S.
  - **The continued economic growth of China translates to increasing demand for oil products in East Asia.** China's robust growth helps global demand outpace global supply.
  - **Sustained economic growth in developing countries (in particular India) will increase global oil demand and increase global oil prices.**
  - **The projected tapering of U.S. oil production has depressed oil forecasts.** Should projected trends prove accurate, then oil prices will trend upward.
  - **The resolve of OPEC to maintain its supply crunch in the midst of the restructuring of supply and demand is expected to further accentuate existing upward pressure on oil prices.**

Figure 2: Summary of Primary Price Determinants of Oil



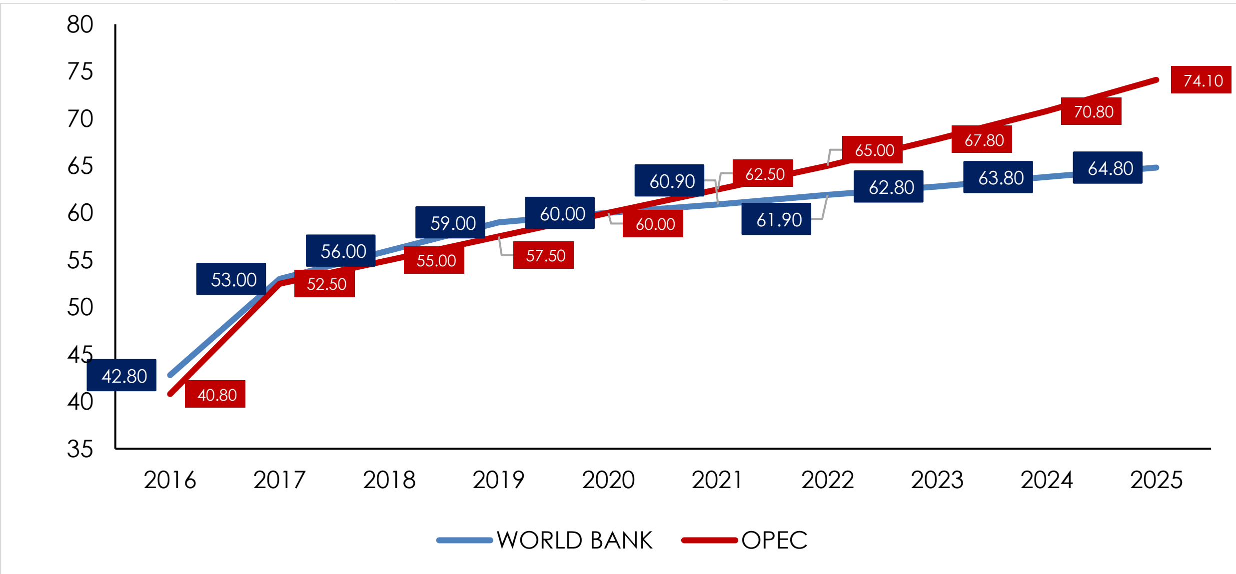
Other Important Considerations

- **Recent price increases in oil can be partly attributed to the crackdown in Saudi Arabia orchestrated by Saudi Crown Prince Mohammed bin Salman.** The increases are due to fears of a crisis in Saudi Arabia. The perceived success of the crackdown and the expected consolidation of power around the crown, however, are projected to quell concerns regarding Saudi oil supply stability and quash anxiety-driven pressures on prices.
- **The continuing economic crisis in OPEC-member Venezuela has depressed the Venezuelan oil supply.** Reuters reported last November 13 that Venezuela's crude output hit a three-decade low of below 2 million barrels per day. Lower output by Venezuela lowers global supply which in turn could exert upward pressure on oil prices.
  - Reports suggest that OPEC-member Iraq is poised to fill the supply void left by Venezuela.
  - An argument can be made that the Venezuelan crisis made it easier for OPEC-member countries to commit to the supply crunch.
- **Tensions in the Middle East, particularly between Saudi Arabia and Qatar (which escalated in June 2017) increases geopolitical risks around the region.** While no armed confrontation between Qatar and Saudi occurred, escalation of tensions between the countries can disrupt the global oil supply chain. Saudi and Qatar, along with other oil exporters in the Middle East use the same route in transporting oil exports to the rest of the world.
- In 2016, the United Nations lifted its economic sanctions against Iran. **As such, Iran can now trade its oil freely in the world markets thereby increasing global oil supply.**
- **According to the OPEC, the proliferation of hybrid and pure-electric vehicles are not expected to occur in the short-term.** The OPEC expects demand for its supply to remain approximately flat until 2025 - with much of the demand coming from the transportation sector.

Oil Price Projections

- **Estimates from the World Bank and the OPEC indicate that oil prices are expected to increase in the coming decade. The figures imply 2017 to 2022 compound annual growth rates of 3.15% (World Bank) and 4.36% (OPEC).**

Figure 3: Crude Oil ($/bbl) Forecasts



Source: World Bank. OPEC

- The following section provides diesel and gasoline price estimates based on the CAGR values from the OPEC and World Bank estimates as well as excise tax rates contained within HB 5636 and SB 1592.

Excise Tax Rates and Fuel Price Forecasts

Diesel

Figure 4: Comparison of Diesel Excise Rates by TRAIN Proposal

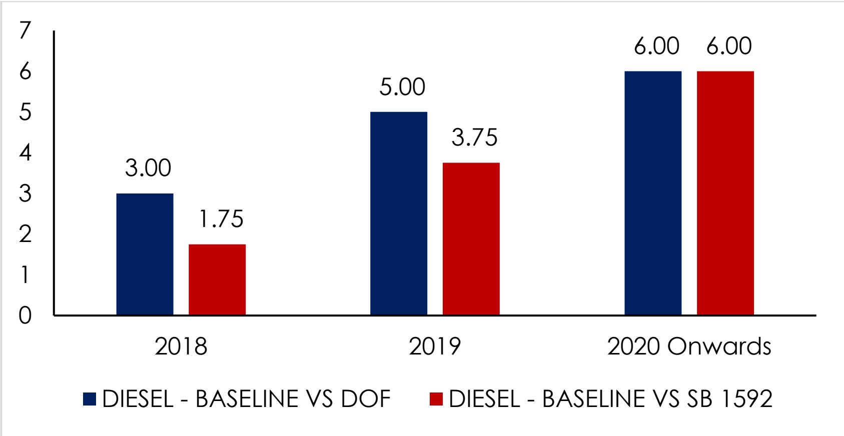


Figure 5: Diesel Price Trajectories Given World Bank CAGR of 3.15% per Annum

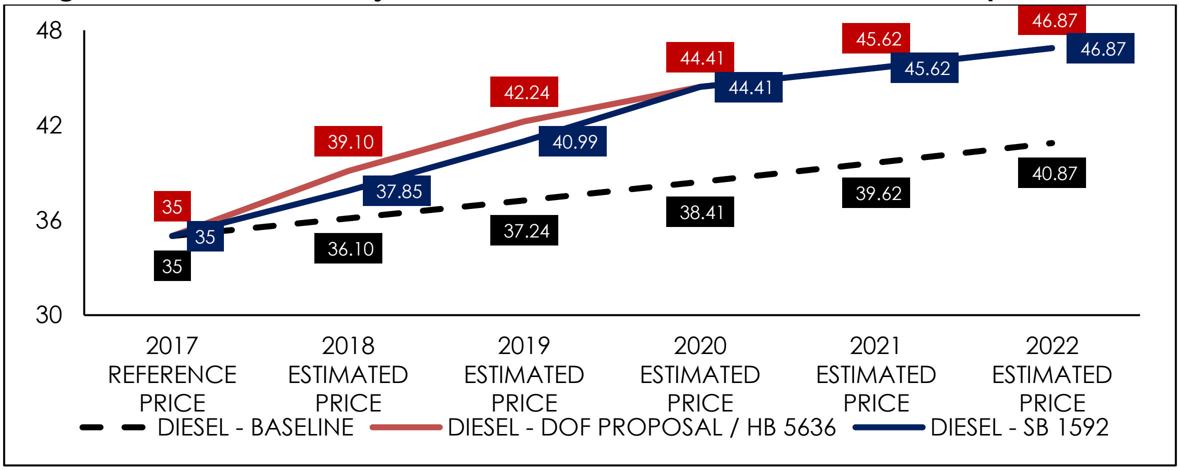
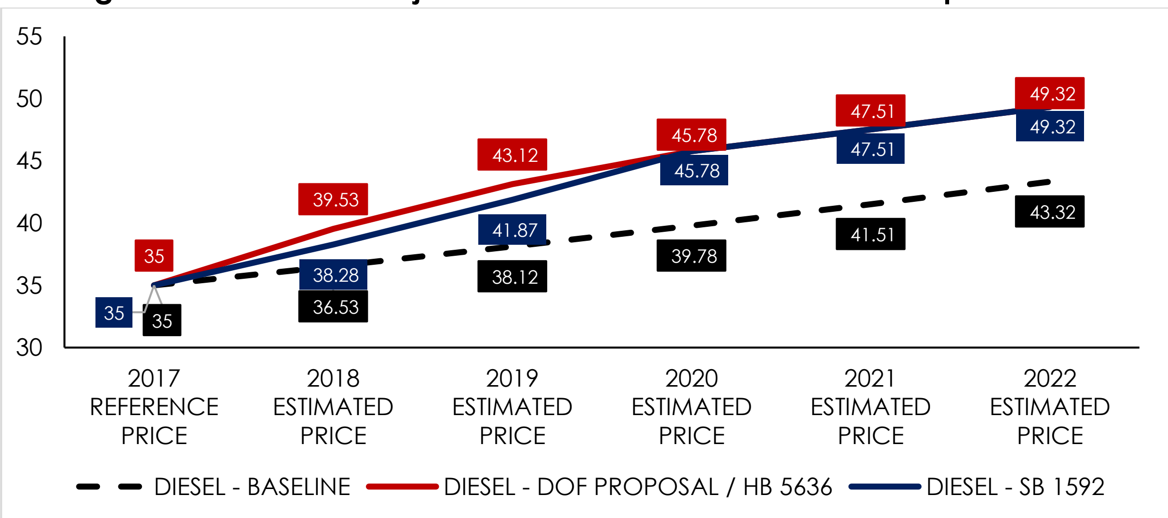


Figure 6: Diesel Price Trajectories Given OPEC CAGR of 4.36% per Annum



- The estimates indicate that diesel prices can increase by 17% (WB) to 24% (OPEC) from 2017 to 2022. Upon imposition of the diesel fuel excise tax, diesel prices can increase by 30% (WB) to 41% (OPEC).
    - Given existing prices and forecasts, the excise tax will be approximately 15% of the pump price.

Gasoline

Figure 7: Comparison of Gasoline Excise Rates by TRAIN Proposal

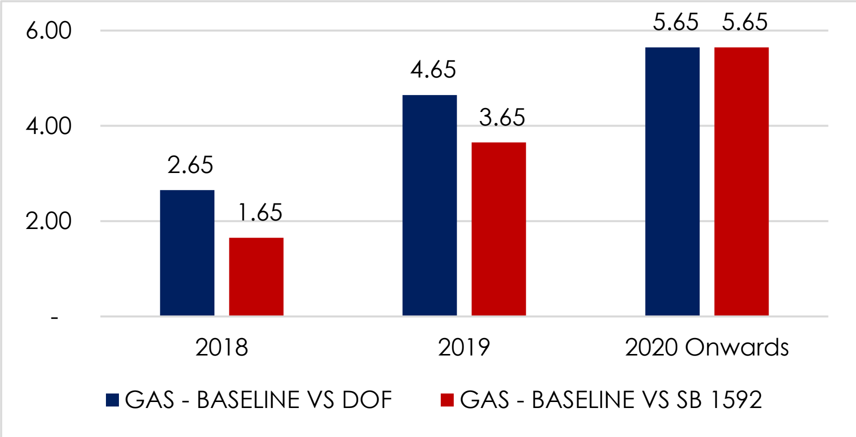


Figure 8: Gasoline Price Trajectories Given World Bank CAGR of 3.15% per Annum

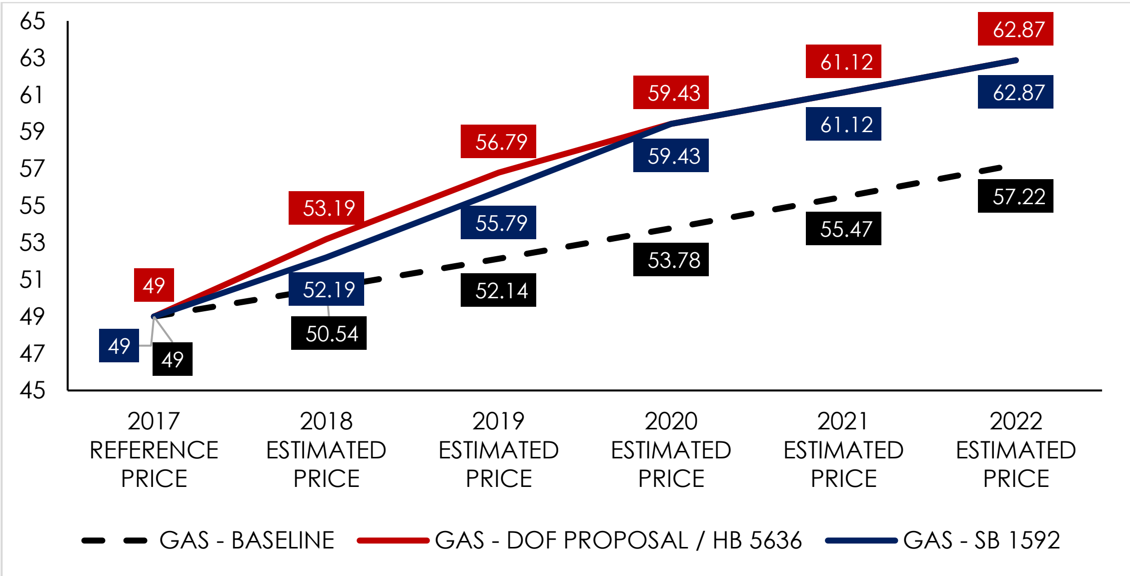
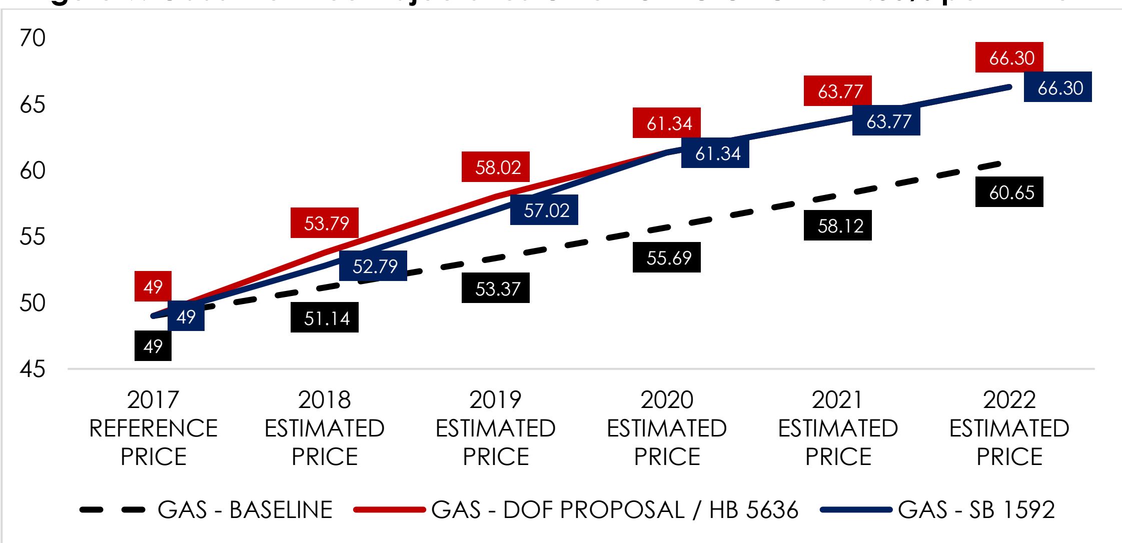


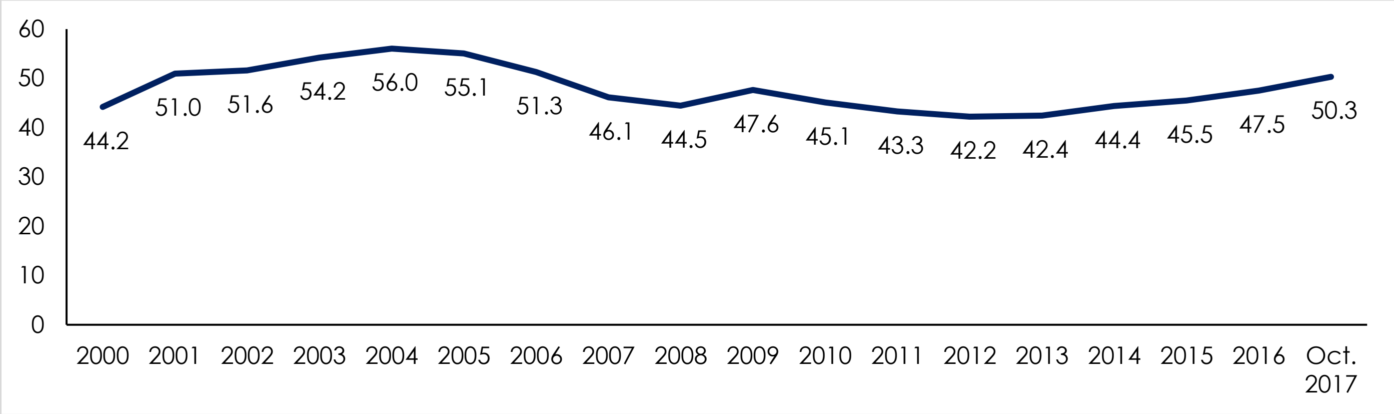
Figure 9: Gasoline Price Trajectories Given OPEC CAGR of 4.36% per Annum



- The estimates indicate that gasoline prices can increase by 17% (WB) to 24% (OPEC) from 2017 to 2022. Upon imposition of the diesel fuel excise tax, gasoline prices can increase by 28% (WB) to 35% (OPEC).
  - Given existing prices forecasts, the excise tax will be approximately 10% of the pump price.

Foreign Exchange

Figure 10: Peso-Dollar Exchange Rate



- **The depreciation of the peso can be viewed as a critical factor in the determination of future oil prices. If the depreciation of the peso persists, then the price of (imported) oil will rise.**
- An argument can be made that low oil prices in recent years have contributed to increases in oil imports. This, in turn, could be viewed to have contributed to the depreciation of the peso.

Discussion and Recommendations

- **The fuel excise rates contained in HB 5636 are no different from the fuel excise rates suggested by the DOF in its proposal to congress.**
- **HB 5636 and SB 1592 converge towards the same diesel excise tax rate of 6 pesos per liter. The crucial difference is that SB 1592 imposes a significantly lower excise tax rate on the first year (HB 5636: 3 pesos, SB 1592: 1.75 pesos).**
- **HB 5636 and SB 1592 converge towards the same additional excise tax rate of 5.65 pesos per liter. The crucial difference is that SB 1592 imposes a significantly lower additional excise tax rate on the first year (HB 5636: 2.65 pesos, SB 1592: 1.65 pesos).**
- **SB 1592 thus provides consumers with a "discount" for the first two years (1.25 for diesel,1 for gas).**
- An argument can be made that discount implicit in SB 1592 provides a buffer for projected oil price increases in the next two years. **The rates of SB 1592 can offset part of the demand-driven oil inflation in the coming years.**
- **Market volatility brought about by the rebalancing of global supply and demand for oil can be expected to decrease in two to three years** (i.e. continued growth of western oil exports, the end of the OPEC deal, and, to a lesser extent, the recovery of Venezuela).
- **If price increases taper off with the stabilization of the market, the adoption of the rates in SB 1592 instead of the rates in HB 5636 will result in a smoother price trajectory for both gasoline and diesel.** In contrast, if the rates in HB 5636 are adopted then the inflation from the volatility will be augmented (instead of dampened).
    - **Dampening inflationary pressure from oil could also be viewed to be critical to keeping overall domestic inflation low.**
    - Keeping domestic inflation low – especially for fuels as well as maintaining a smoother fuel price trajectory, would **help maintain present levels of demand and help preserve existing economic growth momentum.**
    - Keeping domestic inflation low **allows the central bank more leeway with its policy instruments**. Given a lower inflation trajectory (especially for the next two to three years), would allow it to raise interest rates at a later time. This, in turn, helps encourage the growth of investments.
- **Deferring the bulk of the tax rate to 2020 can prove to be immensely beneficial – if the expected volatility of global oil prices proceeds as predicted.** Adopting the HB 5636 rates given current economic conditions will magnify the (adverse) economic impacts of the aforementioned short-term volatility. Sharp increases in the next few years would amplify the expected growth of global oil prices.