**Exchange Rate**

The exchange rate will affect BOTH demand and supply. New Zealand exports at least 30% of what it produces.

**Exports**

Goods produced in New Zealand and sold overseas – such as dairy products, wool, meat, logs and timber, kiwifruit, Canterbury clothing, Macpac camping equipment, Fisher and Paykel washing machines, etc. Exports include services such as foreign tourists visiting New Zealand and spending money on bungy jumping, white water rafting, skiing, hotels, transport, etc.

**Imports**

Goods produced overseas and sold in New Zealand – such as bananas, cars, tractors, oil, coffee, tea, TVs, videos, DVDs, CD players etc. New Zealanders also purchase services from overseas companies. Services such as insurance, transport, shipping, air travel with foreign airlines, borrowing from foreign banks.

**Foreign Exchange Market**

The buying and selling of a particular currency is carried out through the foreign exchange market. This market operates the same as any other market with a demand and supply for currency determining **the price** e.g. 1NZD = 0.92AUD. This means that $1 New Zealand will cost 92 cents Australian to buy OR $1 will buy 92 cents Australian.

There is a need for a foreign exchange market because different countries have different currencies and in order to make trade between countries easier it is necessary to establish the value of each currency in comparison to another.

**Basics of Currency Conversion**

**$1NZ = US0.50**

Converting a foreign price e.g. $20,000 US to New Zealand dollar value requires the foreign price to be divided by the exchange rate.

$20 000US / 0.5 = $40,000 NZ

Converting a New Zealand price e.g. $40,000 NZ to a foreign dollar value requires the NZ price to be multiplied by the exchange rate.

$40 000NZ x 0.5 = $20,000 US

**Example**

You have booked a holiday to the United States of America and have saved $15,000 New Zealand as spending money. You are trying to figure out when is a good time to change your savings into US dollars for the trip.

The exchange rate is currently is $NZ =$ 0.8 US. How much would you get in $US if you converted your NZ $15,000 now?

$US \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The exchange rate could be $NZ = $0.70 US in the days before you leave. How much would you get in $US if you converted your NZ $15,000 just before you leave?

$US \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Explain using the information you have calculated when it is the best time to convert the $NZ into $US?

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Explain why you didn’t convert the $15,000 NZ into US dollars as soon as you had saved that amount?

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New Zealand has a floating (flexible) exchange rate, thus the price of New Zealand currency fluctuates on a day to day basis as determined by the forces of demand and supply. A change in demand or a change in supply will change the exchange rate i.e. the price of New Zealand currency will change.

**Exchange Rate Appreciation and Depreciation**

**Appreciation**

When the exchange rate in New Zealand **appreciates** it means the **price of one New Zealand dollar just got more expensive in terms of the overseas currency that will be required to buy it (not good for exporters).** It also means **one New Zealand dollar will buy more foreign currency (good for importers).**

**Example**

The following exchange rate for the $NZ exists (1NZD = $0.55US). This means:

* it will cost Americans 55 cents US to buy $1 New Zealand or
* $1NZ will buy 55 cents US.

Now if the exchange rate **appreciates** to (1NZD =0.60US). This means:

* it will now cost Americans 60 cents US to buy $1 New Zealand or
* $1NZ will buy 60 cents US.

Thus the price of $1NZ has increased by 5 cents US for US consumers but for NZ consumers $1NZ will buy them an extra 5 cents US.

An exchange rate that **appreciates** is **good** for **importers** and **not** good for **exporters**.

**Exporters**

Exporters will suffer with an appreciation as the **foreign currency they have earned overseas when converted back into New Zealand dollars will be less** which is a reduction of their income. This will often reduce the profitability of the overseas market to the exporter as they will still face the same costs.

Example

New Zealand apple growers (exporters) sell apples to the US and earn $60million US. When the exporters convert the $60US million back to New Zealand currency at an exchange rate of $1NZD=$0.55 US they earn

$60million/ 0.55 = $109million NZ

However if the exchange rate was 1NZD =$0.60US then they would only earn

$60million /0.6 = $100million NZ

This could make this market unprofitable and could see a reduction in **SUPPLY** unless New Zealand apple growers could find another market to sell in.

Another way of looking at this is when the price is in $NZ. Apples that sell for $100 million NZ will cost:

$100m x 0.55 = $55 million US when the exchange rate is $1NZD=$0.55 US

$100m x 0.6o = $65 million US when the exchange rate is $1NZD =$0.60 US

The apples became more expensive in $US which could see the DEMAND for them fall. The fall in demand will see Apple growers reduce their supply if they cannot sell to other markets profitably.

## *So to recap, an appreciation of the $NZ is bad for exporters because:*

* The foreign currency they have earned overseas when converted back will earn them **LESS** New Zealand dollars or
* Overseas businesses/ tourists/ international tourists buying goods and services in NZ / priced in $NZ will find them **more expensive in terms of their currency** thus they will buy less reducing the profits of NZ exporters.

## Importers

## Appreciation of NZ$ against US$ means American products will now be cheaper in terms of NZ currency required to buy them.

## Example

1000 computers imported from the US costs **$100 000 US**

* Previously it would have cost the New Zealanders 100 000 /0.55 = $181,818 NZ
* **Now** it will cost New Zealanders 100 000 / 0.6 = $166 667 NZ

**This** could well mean that it is now cheaper for anybody in the agricultural industry to import raw materials e.g. Gallagher in Hamilton import a lot of the parts that go into the electric fences they produce. This will increase the SUPPLY.

**Depreciation of the Exchange Rate**

When the exchange rate in New Zealand **depreciates** it means the **price of one New Zealand dollar just got less expensive/ cheaper in terms of the overseas currency that will be required to buy it (good for exporters).** It also means **one New Zealand dollar will buy less foreign currency (NOT good for importers).**

**Example**

The following exchange rate for the $NZ exists (1NZD = $0.60US). This means:

* it will cost Americans 60 cents US to buy $1 New Zealand or
* $1NZ will buy 60 cents US.

Now if the exchange rate **depreciates** to (1NZD =0.55US). This means:

* it will now cost Americans 55 cents US to buy $1 New Zealand or
* $1NZ will buy 55 cents US.

Thus the price of $1NZ has decreased by 5 cents US for US consumers but for NZ consumers $1NZ will buy them 5 cents US less.

An exchange rate that **depreciates** is **good** for **exporters** and **not** good for **importers**.

**Exporters**

Exporters will benefit with a depreciation as the **foreign currency they have earned overseas when converted back into New Zealand dollars will be MORE** which is an increase of their income. This will often increase the profitability of the overseas market to the exporter as they will still face the same costs.

**Example**

New Zealand apple growers sell $60US million of apples to the USA.

When the exporters convert the $60US million back to New Zealand currency at an exchange rate of $1NZD=0.6 US they earn

$60million/ 0.6 = $100million

However if the exchange rate was 1NZD =0.55US then they will earn

$60million /0.6 = $109million

Another way of looking at this is when overseas visitors come to NZ their foreign currency will buy them more New Zealand dollars because of the depreciation. Overseas tourism to New Zealand or international students gaining an education are both examples of exporting and effectively the **cost of their holiday or education in New Zealand just becomes LESS** in terms of the foreign currency required.

**Example**

* A US tourist saved $20 000 US and when this is converted at 60 cents they would get \_\_\_\_\_\_\_\_\_\_NZD and when the exchange rate is 55 cents they only get \_\_\_\_\_\_\_\_\_\_\_\_NZD which means they have \_\_\_\_\_\_\_\_\_NZD MORE to spend or
* The US tourist has worked out their holiday in New Zealand will cost them $30,000 NZ. At an exchange rate of $1NZD=0.60 US this will cost them \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ US and with the depreciation to $1NZD=0.55 US it will now cost them \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ US which is a reduction of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ US.

In the terms of overseas education it will cost an American student $40 000 NZ to be educated in New Zealand. When the exchange rate at 60 cents is applied it means their education will cost $24 000US but with a depreciation the cost will fall to $22 000US. Thus more Americans may choose NZ for their education **as it just became cheaper in terms of their currency.**

## *So to recap, a depreciation of the $NZ is good for exporters because:*

* The foreign currency they have earned overseas when converted back will earn them **MORE** New Zealand dollars or
* Overseas businesses/ tourists/ international tourists buying goods and services in NZ / priced in $NZ will find them **less expensive in terms of their currency** thus they will buy more increasing the profits of NZ exporters.

## There could well be an increase in DEMAND as a result of the lower prices that the exports are selling for. Exporters will also increase their SUPPLY to meet the increased demand.

## *Importers*

**Depreciation** of NZ$ against US$ means **American products will now be more expensive in terms of NZ currency** required to buy them.

## Example

1000 computers imported from the US costs **$100 000 US**

* Previously it would have cost New Zealanders 100 000 / 0.6 = $166 667 NZ
* **Now** it will cost New Zealanders 100 000 /0.55 = $181,818 NZ

**Result:** the computers are now more expensive for New Zealanders and it could well mean there will be decreased demand in New Zealand for American computers.

NZ exporters may have reduced SUPPLY as the cost to import raw materials or technology or machinery has increased resulting in them reducing their supply as it is not profitable to do so.

**Win, Win for Exporters**

The ideal situation for exporters is a situation where the **price they receive overseas increases** and the **exchange rate has depreciated**. An **increase in export volumes** would be fantastic as well!

**Example**

100 tonnes of apples is sold in the USA for $50million US and the exchange rate is $NZ = $0.75 US

The exporter earns $50m/ 0.75 = $66.67m New Zealand.

Now if the price improved in the USA where the 100 tonnes of apples sold for $75m US then at this exchange rate NZ exporters would earn:

$75m/ 0.75 = $100m NZ

and if the exchange had depreciated to $NZ = $0.5 US then NZ exporters would have earned:

$75m/0.5 = $150m NZ

Thus the New Zealand exporter benefits most when the price overseas increases and the exchange rate depreciates. However, it is often the case that most of the gains made by the increase in the price overseas are lost by an appreciation of the $NZ. Let’s look at the effect of this on the $75m US we have earned from apples.

$NZ= $1US i.e. it has appreciated to this from $NZ = $0.75 US.

Remember at the exchange rate of $NZ = $0.75 US NZ exporters earn $100m NZ, now with the appreciation they earn:

$75m/1 = $75 m NZ

The higher price has been of benefit to NZ exporters as they now receive $75m NZ compared to $66.67m they received when the apples sold for $50m US but because the NZ dollar appreciated it is less than the $100m NZ they could have earned if the exchange rate had stayed at $NZ = $0.75 US.