Course Name: International Business Economics

Course code: 306

Unit -1

Introduction

International trade theories are simply different theories to explain international trade. Trade is the concept of exchanging goods and services between two people or entities. International trade is then the concept of this exchange between people or entities in two different countries.

People or entities trade because they believe that they benefit from the exchange. They may need or want the goods or services. While at the surface, this many sound very simple, there is a great deal of theory, policy, and business strategy that constitutes international trade.

Different theories for international trade have been given by the economist to understand that why international trade takes place

Ricardo theory of Comparative Advantage

Comparative advantage is when a country produces a good or service for a lower opportunity cost than other countries. Opportunity cost measures a trade-off. A nation with a comparative advantage makes the trade-off worth it. The benefits of buying its good or service outweigh the disadvantages. The country may not be the best at producing something. But the good or service has a low opportunity cost for other countries to import.

For example, oil-producing nations have a comparative advantage in chemicals. Their locally-produced oil provides a cheap source of material for the chemicals when compared to countries without it. A lot of the raw ingredients are produced in the oil distillery process. As a result, Saudi Arabia, Kuwait, and Mexico are competitive with U.S. chemical production firms. Their chemicals are inexpensive, making their opportunity cost low.

Another example is India's call centres. U.S. companies buy this service because it is cheaper than locating the call centre in America. Indian call centres aren't better than U.S. call centres. Their workers don't always speak English very clearly. But they provide the service cheaply enough to make the trade-off worth it.

eighteenth-century economist David Ricardo created the theory of comparative advantage. He argued that a country boosts its economic growth the most by focusing on the industry in which it has the most substantial comparative advantage.

For example, England was able to manufacture cheap cloth. Portugal had the right conditions to make cheap wine. Ricardo predicted that England would stop making wine and Portugal stop making cloth. He was right. England made more money by trading its cloth for Portugal's wine,

and vice versa. It would have cost England a lot to make all the wine it needed because it lacked the climate. Portugal didn't have the manufacturing ability to make cheap cloth. So, they both benefited by trading what they produced the most efficiently.

Example of Comparative Advantage

- Assume two countries, UK and India
- They both produce textiles and books.
- Their relative production levels are shown in the table below.

Output without trade

	Textiles	Books
UK	1	4
India	2	3
Total	**3**	**7**

- For the UK to produce 1 unit of textiles it has an opportunity cost of 4 books.
- However for India to produce 1 unit of textiles it has an opportunity cost of 1.5 books
- Therefore India has a comparative advantage in producing textiles because it has a lower opportunity cost.
- The UK has a comparative advantage in producing books. This is because it has a lower opportunity cost of 0.25 (1/4) compared to India's 0.66 (2/3)

Specialisation and trade

- **If each country now specializes in one good then, assuming constant returns to scale, output will double.**

Output after trade

	Textiles	Books
UK	0	8
India	4	0
TOTAL	**4**	**8**

- Therefore, the total output of both goods has increased – illustrating the potential gains from exploiting comparative advantage.
- By trading the surplus books and textiles, India and UK can enjoy higher quantities of the goods.

Assumptions of Comparative advantage theory

The following are the assumptions of the Ricardian doctrine of comparative advantage:

1. There are only two countries, assume A and B.
2. Both of them produce the same two commodities, X and Y.
3. Labour is the only factor of production.
4. The supply of labour is unchanged.
5. All labour units are homogeneous.
6. Tastes are similar in both countries.
7. The labour cost determines the price of the two commodities
8. The production of commodities is done under the law of constant costs or returns.
9. The two countries trade on the barter system.
10. Technological knowledge is unchanged.

11. Factors of production are perfectly mobile within each country. However, they are immobile between the two countries.
12. Free trade is undertaken between the two countries. Trade barriers and restrictions in the movement of commodities are absent.
13. Transport costs are not incurred in carrying trade between the two countries.
14. Factors of production are fully employed in both the countries.
15. The exchange ratio for the two commodities is the same

Criticisms of Comparative advantage

Cost of trade. To export goods to India imposes transport costs.

External costs of trade. Exporting goods leads to increased pollution from 'air-freight' and can contribute to environmental costs not included in models which only include private costs and benefits.

Diminishing returns/diseconomies of scale. Specialisation means a country will increase the output of one particular good. However, for some industries increasing output may lead to diminishing returns. For example, if Portugal has a comparative advantage in wine, it may run out of suitable land for growing grapes. A contemporary example is Mongolia. Mongolia was believed to have a comparative advantage in cattle farming. However, according to Erik Reinert opening of markets to international competition in 1991 led to an increased size of animal herds, but this led to over-grazing and loss of grazing land.

Static comparative advantage. A developing economy, in sub-Saharan-Africa, may have a comparative advantage in producing primary products (metals, agriculture), but these products have a low-income elasticity of demand, and it can hold back an economy from diversifying into more profitable industries, such as manufacturing.

Dutch disease. Dutch disease is a phenomenon where countries specialise in producing primary products (oil/natural gas) but doing this can harm the long-term performance of the economy. In the 1970s, the Netherlands specialised in producing natural gas, but this led to the neglect of manufacturing and when the gas industry declined, the economy was left behind its near neighbours.

Trade – not a Pareto improvement. Trade can lead to an increase in net economic welfare. However, it doesn't mean that everyone will become better off. Some workers in uncompetitive industries may lose out and struggle to gain employment in new industries.

Gravity theory. Proposed by Jan Tinbergen, in 1962, this states that international trade is influenced by two factors – the relative size of economies and economic distance. The model suggests that countries of similar size will be attracted to trade with each other. Economic distance depends on geographical distance and trade barriers. The implication is that countries economically close and of similar size will engage in similar levels of bilateral trade. It also suggests trade is more likely between countries which are geographically close.

Complexity of global trade. Models of comparative advantage usually focus on two countries and two goods, but in the real world, there are multiple goods and countries. Increasingly there is growing demand for a variety of goods and choice – rather than competing on simple price.

Heckscher Ohlin model of factor abundance

Eli Heckscher (1919) and Bertil Ohlin (1933) found the basis for crucial and substantial theoretical developments of international trade by emphasizing the relationships between the composition of countries' factor endowments and commodity trade patterns. The Heckscher-Ohlin (H-O) theory is the simplest explanation for why countries involve in trade of goods and services with other countries. Heckscher-Ohlin model, which is the general equilibrium mathematical model of international trade theory, is built on the Ricardian theory of comparative advantage by making prediction on trade patterns and production of goods based on the factor endowments of nations (Learner 1995).

Assumptions of the Heckscher- Ohlin Model

The following assumptions pertain to the 2*2 model of Heckscher-Ohlin.

1. It is assumed that there are only two nations (1 and 2) with two goods for trade (X and Y) and two factors of production (capital and labour).

2. For producing the goods, both nations use the same technology and they use uniform factors of production.

3. In both countries, good X is labour intensive and Y is capital intensive.

4. The tastes and preferences of both nations are the same (both countries can be represented in the same indifference curve).

5. In both nations, the assumption of constant returns to scale is applicable for the production of goods X and Y.

6. In both nations, specialization in production is not complete.

7. Goods and factor markets in both nations are perfectly competitive.

8. There exists perfect mobility of factors of production within each country though international mobility is not possible.

9. There are no restrictions or limitations to the free flow of international trade. That is, there exist no transportation costs, tariffs, or like other obstructions either to control or to restrict the exports or imports.

10. It is assumed that there exists full employment of all resources in both nations. That is, there will not be any under employed resource in either nation.

11. The exports and imports between the nations are balanced. It means that the total value of the exports will be equal to the total value of imports in both nations**.**

The Heckscher-Ohlin Model

Heckscher-Ohlin model is generally described as two countries, two goods and two factors model (2x2x2 model). This formulation of HO model was mathematically developed by Paul Samuelson. The goal of the model is to predict the pattern of international trade in commodities between the two countries on the basis of differences in factor endowments in both the countries.

Definition: A nation exports the commodities which are produced out of its relatively abundant and cheap factors or resources and imports the commodity which is produced out of relatively scarce factors or resources. In another words, relatively labour abundant country exports relatively labour-intensive commodity and imports the relatively capital-intensive commodity. Country 1 exports commodity X because X is the Labor (L) intensive commodity and L is relatively cheap and abundant factor in country 1. Country 2 exports commodity Y because Y is the Capital (K) intensive commodity and K is relatively cheap and abundant factor in country 2.
The theory implicates two things: first, different supply conditions in terms of resource endowments explain comparative advantage and second, countries export goods that use abundant and cheap factors of production and import goods that use scarce and expensive factors.
According to Heckscher-Ohlin theory, international and interregional differences in production costs occur due to the differences in the supply of factors of production. Under free trade, countries export the commodities whose production requires intensive use of abundant factors and import the commodities whose production requires the scarce factors. Hence, international trade compensates for the uneven geographic distribution of factors of production. The theory gives insight to the fact that commodities are the bundles of factors (land, labour and capital). Thus, the exchange of commodities is indirect arbitrage of factors of production and the transfer of services of otherwise immobile factors from regions where factors are abundant to regions where they are scarce.
The H-O theorem identifies the basic reason for comparative advantage and international trade as the different factor abundance or factor endowments among nations. Because of this particular reason, the theory is known as factor proportions or factor endowment theory. The theory postulates that the difference in relative factor endowment and prices is the main reason for the difference in relative commodity prices between two countries.

Factor Endowments

Factor endowment can be defined as the ratio of capital to labour (K/L). If the capital – labour ratio in country 1 is greater than in country 2, then country 1 is said to be relatively capital-abundant

(and labour-scarce) while country 2 is labour abundant (and capital scarce). Symbolically, this can be represented as:

(K/L) 1 > (K/L) 2
Important implication of different factor endowments is for autarky prices of factors of production (the autarky prices are implied in the figure represented below).

For two countries with same demand patterns, relative factor prices lead to relative factor scarcities. Country 2 will have relatively inexpensive labour and country 1 is in a position to provide relatively inexpensive (abundant) capital**.**

Criticism

1. Poor prediction and performance.
2. The unfair assumption that all labour is employed. This model assumes that all labor in the country is employed thus ignoring the concept of unemployment.
3. The unrealistic assumption that identical production exits. This model assumes that nations have the same technology being used for production undermining the effects and ignoring the technological gaps.
4. Logical Flaws – Capital is assumed as being homogeneous and transferrable between countries.

Krugman's model of Intra-Industry Trade

To many young economics students, Paul Krugman's legacy is defined, in large part, by his blog. If you have not had a chance to read his academic work, your view of him is going to be based on Krugman the pundit and Krugman the economist who advocates for fiscal stimulus, the minimum wage — an economist who is turning towards Old Keynesian, or Post Keynesianism, whatever the differences may be. But, modern Krugman is probably not what will be remembered within 15–30 years. Rather, what he is known for by economists, and what he will be known for in the future, is his work in trade and international monetary theory (specifically, exchange rates and capital flows). This is what he won the Nobel Memorial Prize for, in 2008. Krugman introduced a formal model of a new trade theory, an alternative to the theory of comparative advantage.

This post is an attempt to communicate the core of Krugman's theory, for the layman. I will rely mainly on three of Krugman's original articles on the subject: Krugman (1979), Krugman (1980), and Krugman (1981). There is also Krugman (1985), but the three earlier papers are shorter and go straight to the point, so I recommend interested readers to read those.1 I am also using my favorite textbook, Krugman, Obstfeld, and Melitz, International Economics.

Prior to the 1980s, most trade theorists thought about international trade within the Ricardian framework of comparative advantage. The theory states that, assuming heterogeneous agents and opportunity costs, a person can specialize in producing the good of lowest opportunity cost to them and trade for other products (produced by other people) and be better off than if there were no trade at all, and each person manufactured everything they want on their own. If someone else can make you t-shirts at a lesser opportunity cost than you, you can buy the t-shirt at that cost, and use your own time towards something more productive. You specialize in products others' demand, which you can sell to them at at least the cost of production — and your relative costs are the lowest, so that is where your competitive advantage is.2

Ricardian trade theory continued to be developed throughout the 19th and 20th centuries, and one of the directions later economists took Ricardian trade theory in is worth mentioning. In the early 20th century, trade theorists began working towards what is now known as the Heckscher–Ohlin theory. Ohlin would go on to win the Nobel Memorial Prize, in 1977. The main insight the model gives is that countries will tend to specialize in goods that are relatively intensive in the inputs (factors of production) that country is relatively abundant in. Thus, the model looks at differences in factor endowments as a cause of international trade. If the U.S. is relatively abundant in capital and Mexico is relatively abundant in labor, it means that the ratio of labor to capital is lower in the U.S. than it is in Mexico. If labor is cheaper in Mexico, Mexican industry is likely to use a greater labor to capital ratio in their production than U.S. industry. Mexico will also tend to produce more of their labor-intensive goods, because labor is relatively inexpensive (to capital). The U.S. will export capital-intensive goods to Mexico, and Mexico labor-intensive goods to the U.S.

But, there are empirical problems to Ricardian trade theory,

Against the predictions of the Heckscher–Ohlin theory, Wassily Leontief, in a 1953 article, published data showing that U.S. exports are less capital-intensive than its imports.
Other evidence shows that the degree to which countries specialize is exaggerated in the models, and that intra-trade industry makes up a significant chunk of international exchange that is not accounted for by standard, Ricardian, trade theory.
After the Second World War, and before the 1990s, it was found that growth in international trade was not leading to the distributional changes that Ricardian theory predicts. In fact, trade was found to be, in large part, neutral to income distribution.
Economists had been toying around with the relationship between economies of scale and trade, but it wasn't until Krugman that we had a simple formal model. Krugman also took the original insights and developed them further. He did all this by focusing on internal returns to scale, and by adopting a recent modelling innovation in Dixit and Stiglitz (1977), making it easier to model monopolistic competition.

Assuming a situation where are all agents have identical comparative costs, technologies, and tastes, and there is only one factor, there are none of the standard reasons for trade. But, we assume

that there are internal economies of scale. Internal economies of scale occur as long as the average cost per unit of output falls as total output increases. The easiest reasons to cite for internal economies are high fixed costs, where more output allows the firm to spread this fixed cost. If there are internal economies of scale, markets are not perfectly competitive. Instead, there will be less firms, and each firm will produce more. Each firm will also have an incentive to differentiate their product from those of their competitors — if they are close/imperfect substitutes —, to compete for profits. The total number of firms can be said to be determined by average cost and price. As long as price is higher than average cost, it might pay for new firms to enter the market to compete; but, when price equals average cost, profits won't be high enough for new firms to recover their fixed cost investment.

The size of an economy matters for its well-being. All else equal, larger economies — economies with more people — are wealthier. This is because larger economies will have higher demand, will have more inputs, and therefore more output. More output allows firms to exploit greater internal economies of scale, which in turn lowers average cost. Prices fall, real wages increase, the number of firms will increase, and therefore product diversity will increase (the italicized consequences are welfare-enhancing).

International trade creates similar benefits as population growth. If trade between, say, the U.S. and China suddenly emerged, the market each firm face would grow. There will be fewer total firms (if the two countries were isolated, the sum of their firms would be greater than the total number of firms in an integrated market), and each surviving firm would produce more, but all consumers in both countries would be able to buy from a greater range of firms. That is, the diversity of the products offer would increase. The price per unit would also fall, because of the exploitation of further internal economies of scale. Thus, even if none of the standard reasons for trade (comparative advantage) existed, trade would still occur, to exploit the benefits of internal economies of scale.

One implication is that if there are barriers to trade, factors of production will tend to move to countries where there are economies of scale in industries relatively intensive in a given factor (input). For example, if we assume that the only factor is labor, barriers to trade would induce foreign labor to move to the country with the largest market. Remember, larger markets mean more product diversity and higher real wages, both of which are incentives to immigrants. As immigrants arrive, the market grows further, and real wages and product diversity will increase. Sending states, in turn, become poorer, as product diversity and real wages fall.

Countries will, all else equal, export the goods where domestic demand is highest. It will behove firms to localize production in markets where demand for that type of product is highest. This is because these firms will be able to exploit greater internal economies of scale than anywhere else. Thus, under conditions of internal economies, countries will tend to export the good they produce more of. In a world of no transaction costs, differences in local demand for a product will induce

the country with the greatest internal economies to specialize in that product. In a world of transaction costs — where there are added costs to trade —, specialization will be more limited, because these costs reduce the profitability of exporting. Also, the extent of internal economies will also decide the extent of specialization; the less the opportunities for internal economies, the less a country will specialize in a type of good. Thus, with costs to trade and limits to economies of scale, what we expect is intra-industry trade, as each country produces multiple types of good and trade these between each other, even goods of the same type. But, generally speaking, the country with the larger home market for a given good will be a net exporter of that good, because of economies of scale (and out of interest in minimizing transaction costs).

Finally, the type of trade between two nations has much to do with differences in factor endowments (the type of inputs which are relatively abundant). If two countries are similarly endowed, then trade will tend to be of the intra-industry type. As factor endowments become more unique, the type of trade predicted by the Heckscher–Ohlin model will prevail. The implications for changes in the distribution of income as a result of trade is that if endowments are the same, trade is Pareto optimal. If factor endowments differ, how much they differ will decide relative gains from trade and changes in income distribution. Namely, the more unique a country's factor endowment, the more the relatively scarce factor will lose from trade and the relatively abundant factor will gain. The scarce factor loses, because with international trade, the price of that product in that country falls (as it faces competition from foreign producers, who have lower costs, because they are in countries that have a relative abundance in that factor). Whether trade is Pareto optimal depends on whether the welfare increase from product differentiation is large enough to make up for the relative loss of income for the scarce factor.

The internal economies of scale argument Krugman formalized allows economists to explain aspects of international trade that were previously not explainable by Ricardian comparative advantage. If there are internal economies of scale — firms are monopolistically competitive —, markets will be supplied by a certain quantity of firms (less than the number in perfectly competitive markets), each producing a greater amount of output than its perfectly competitive analogue. In these cases, even if there are no differences in relative costs, tastes, or technology, there will be gains from trade in the form of lower prices and greater product diversity. Whereas standard Ricardian theory applies when there are differences between agents, economies of scale explain trade when agents are similar. It is an alternative approach to the theories of the division of labor and trade.

All economists borrow from their predecessors and their peers, so Krugman's theory is by no means entirely original to him. In fact, he cites a number of trade theorists who dabbled with economies of scale prior to him: Herbert Grubel, Bertil Ohlin, Irving Kravis, Bela Balassa, et cetera. But, Krugman was able to formalize the theory in a relatively simple model (more simple than alternative approaches to trade with economies of scale). This allowed him to explore the implications of internal economies in greater detail, and with much more precision. This allowed

him to persuade the majority of his peers, whereas previously Ricardian theory had continued to dominate alternatives. This is what rightfully earned Krugman his Nobel Memorial Prize.

Unit -2

Unilateral Trade Practices

A unilateral trade agreement is a commerce treaty that a nation imposes without regard to others. It benefits that one country only. It is unilateral because other nations have no choice in the matter. It is not open to negotiation. The World Trade Organization defines a unilateral trade preference similarly.[1] It occurs when one nation adopts a trade policy that isn't reciprocated. For example, it happens when a country imposes a trade restriction, such as a tariff, on all imports.

It also applies to a state that lifts a tariff on its partner's imports even that's not reciprocated. A large country might do that to help out a small one.

A unilateral agreement is one type of free trade agreement. Another type is a bilateral agreement between two countries. It is the most common because it's easy to negotiate. The third type is a multilateral agreement. It's the most powerful but takes a long time to negotiate.

Some conservatives define unilateral trade policies as the absence of any trade agreement whatsoever.[2] In that definition, the United States would lift all tariffs, regulations, and other restrictions on trade. It's unilateral because it doesn't require other nations to do the same. The argument is that the government should not restrict the rights of its citizens to trade anywhere in the world.

In that scenario, other countries would keep their tariffs on U.S. exports. That would give them a unilateral advantage. They could ship cheap goods into the United States, but U.S. exports would be priced higher in their countries.

Emerging market nations are afraid of any trade agreements with developed nations. They worry that the imbalance of power would create a unilateral benefit to the developed nation.

Salient features:

- Unilateral agreements are one-sided trade arrangements that benefit only one country.
- Unilateral agreements are often options or offers giving a poorer nation more trade benefits.
- U.S. GSP offers duty-free status to 43 least developed countries. This allows the United States to access low cost imports while furthering American foreign policies.

Advantages and Disadvantages

Unilateral trade policies such as tariffs work great in the short term. Tariffs raise the price of imports. As a result, the prices of locally made products seem lower in comparison. This boosts economic growth and creates jobs.

Over time, these advantages disappear. That's when other countries retaliate and add their own tariffs. Now the domestic companies' exports drop. As businesses suffer, they lay off recently hired workers. Global trade drops and everyone suffers.

This occurred during the Great Depression. Countries protected domestic jobs by raising import prices through tariffs. This trade protectionism soon lowered global trade overall as country after country followed suit. As a result, global trade plummeted 65%. Discover other effects of the Great Depression.

After World War II, the United States started negotiating lower tariffs with 15 countries. They were Australia, Belgium, Brazil, Canada, China, Cuba, Czechoslovakia, France, India, Luxembourg, the Netherlands, New Zealand, South Africa, and the United Kingdom.

On January 1, 1948, the General Agreement on Tariffs and Trade went into effect with 23 countries. These were the original 15, plus Myanmar, Sri Lanka, Chile, Lebanon, Norway,

Pakistan, South Rhodesia, and Syria. This lifted all unilateral trade restrictions and the global economy recovered.

Example:

The United States has unilateral trade policies under the Generalized System of Preferences.[3] That's where developed countries grant preferential tariffs to imports from developing countries. It was instituted on January 1, 1976, by the Trade Act of 1974.

The U.S. GSP offers duty-free status for 5,000 imports from 120 countries.[4] That includes 43 of the Least Developed Beneficiary Developing Countries.[5] These include Afghanistan, Bangladesh, Bhutan, Cambodia, Nepal, and Yemen. It also includes 38 African countries that are under the African Growth and Opportunity Act.

In 2015, total duty-free imports under the GSP was $18.7 billion.

The GSP has three goals. The first is to lower the prices of imports for Americans. That's one reason why inflation has subsided. The success of Wal-Mart and other low-cost retailers depends on tariff-free production in these countries.

The second goal is to help the countries become a more affluent market for U.S. exports. Since the countries are small, the volume of these goods doesn't offer significant competition to U.S. companies. But they do provide more customers.

The third goal is to further U.S. foreign policy goals. Countries must abide by U.S. worker rights and intellectual property rights. That helps protect American companies' software, patents, and proprietary manufacturing processes. Worker rights raise the standards of living in those countries. That makes them less competitive against U.S. workers and protects American jobs.

WTO (World Trade Organisation)

The World Trade Organization (WTO) is the only global international organization dealing with the rules of trade between nations. At its heart are the WTO agreements, negotiated and signed by the bulk of the world's trading nations and ratified in their parliaments. The goal is to ensure that trade flows as smoothly, predictably and freely as possible.

The Uruguay round of GATT (1986-93) gave birth to World Trade Organization. The members of GATT singed on an agreement of Uruguay round in April 1994 in Morocco for establishing a new organization named WTO.

It was officially constituted on January 1, 1995 which took the place of GATT as an effective formal, organization. GATT was an informal organization which regulated world trade since 1948.

Contrary to the temporary nature of GATT, WTO is a permanent organization which has been established on the basis of an international treaty approved by participating countries. It achieved the international status like IMF and IBRD, but it is not an agency of the United Nations Organization (UNO).

Structure:

The WTO has nearly 153 members accounting for over 97% of world trade. Around 30 others are negotiating membership. Decisions are made by the entire membership. This is typically by consensus.

A majority vote is also possible but it has never been used in the WTO and was extremely rare under the WTO's predecessor, GATT. The WTO's agreements have been ratified in all members' parliaments.

The WTO's top level decision-making body is the Ministerial Conferences which meets at least once in every two years. Below this is the General Council (normally ambassadors and heads of delegation in Geneva, but sometimes officials sent from members' capitals) which meets several times a year in the Geneva headquarters. The General Council also meets as the Trade Policy Review Body and the Disputes Settlement Body.

At the next level, the Goods Council, Services Council and Intellectual Property (TRIPs) Council report to the General Council. Numerous specialized committees, working groups and working parties deal with the individual agreements and other areas such as, the environment, development, membership applications and regional trade agreements.

Secretariat:

The WTO secretariat, based in Geneva, has around 600 staff and is headed by a Director-General. Its annual budget is roughly 160 million Swiss Francs. It does not have branch offices outside Geneva. Since decisions are taken by the members themselves, the secretariat does not have the decision making the role that other international bureaucracies are given.

The secretariat s main duties to supply technical support for the various councils and committees and the ministerial conferences, to provide technical assistance for developing countries, to analyse world trade and to explain WTO affairs to the public and media. The secretariat also provides some forms of legal assistance in the dispute settlement process and advises governments wishing to become members of the WTO.

Objectives:

The important objectives of WTO are:

1. To improve the standard of living of people in the member countries.

2. To ensure full employment and broad increase in effective demand.

3. To enlarge production and trade of goods.

4. To increase the trade of services.

5. To ensure optimum utilization of world resources.

6. To protect the environment.

7. To accept the concept of sustainable development.

Functions:

The main functions of WTO are discussed below:

1. To implement rules and provisions related to trade policy review mechanism.

2. To provide a platform to member countries to decide future strategies related to trade and tariff.

3. To provide facilities for implementation, administration and operation of multilateral and bilateral agreements of the world trade.

4. To administer the rules and processes related to dispute settlement.

5. To ensure the optimum use of world resources.

6. To assist international organizations such as, IMF and IBRD for establishing coherence in Universal Economic Policy determination.

Anti-dumping duty

An anti-dumping duty is a protectionist tariff that a domestic government imposes on foreign imports that it believes are priced below fair market value. Dumping is a process wherein a company exports a product at a price that is significantly lower than the price it normally charges in its home (or its domestic) market.

In the U.S., the International Trade Commission (ITC)–an independent government agency–is tasked with imposing anti-dumping duties. Their actions are based on the investigations and recommendations they receive from the U.S. Department of Commerce.

In many cases, the duties imposed on these goods exceeds the value of the goods. Anti-dumping duties are typically levied when a foreign company is selling an item significantly below the price at which it is being produced.

While the intention of anti-dumping duties is to save domestic jobs, these tariffs can also lead to higher prices for domestic consumers. And, in the long-term, anti-dumping duties can reduce the international competition of domestic companies producing similar goods.

The World Trade Organization (WTO) is an international organization that deals with the rules of trade between nations. The WTO also operates a set of international trade rules, including the international regulation of anti-dumping measures. The WTO does not intervene in the activities of companies engaged in dumping. Instead, it focuses on how governments can—or cannot—react to the practice of dumping. In general, the WTO agreement permits governments to "act against dumping where there is a genuine (or material) injury to the competing domestic industry."

This intervention must be justified in order to uphold the WTO's commitment to free-market principles. Anti-dumping duties have the potential to distort the market. In a free market, governments cannot normally determine what constitutes a fair market price for any good or service.

Example of an Anti-Dumping Duty

In June 2015, American steel companies United States Steel Corp., Nucor Corp., Steel Dynamics Inc., ArcelorMittal USA, AK Steel Corp., and California Steel Industries filed a complaint with the U.S. Department of Commerce and the ITC. Their complaint alleged that China was dumping steel into the U.S. market and keeping prices unfairly low.

After conducting a review, one year later the U.S. announced that it would be imposing a 500% import duty on certain steel imported from China. In 2018, China filed a complaint with the WTO challenging the tariffs imposed by the Trump administration. Since then, the Trump administration has continued to use the WTO to challenge what it claims are unfair trading practices by the Chinese government and other trading partners.

WTO tariff policy, Quota

nowadays, among WTO members, agricultural products are protected only by tariffs.[1] All non-tariff barriers had to be eliminated or converted to tariffs as a result of the Uruguay Round (the conversion was known as “tariffication”). In some cases, the calculated equivalent tariffs — like the original measures that were tariffed — were too high to allow any real opportunity for imports. So a system of tariff-rate quotas was created to maintain existing import access levels, and to provide minimum access opportunities. This means lower tariffs within the quotas, and higher rates for quantities outside the quotas.

Customs duties on merchandise imports are called tariffs. Tariffs give a price advantage to locally-produced goods over similar goods which are imported, and they raise revenues for governments. One result of the Uruguay Round was countries’ commitments to cut tariffs and to “bind” their customs duty rates to levels which are difficult to raise. The current negotiations under the Doha Agenda continue efforts in that direction in agriculture and non-agricultural market access.

Subsidies and Countervailing duties under the WTO,

The WTO Agreement on Subsidies and Countervailing Measures disciplines the use of subsidies, and it regulates the actions countries can take to counter the effects of subsidies. Under the agreement, a country can use the WTO's dispute-settlement procedure to seek the withdrawal of the subsidy or the removal of its adverse effects. Or the country can launch its own investigation and ultimately charge extra duty ("countervailing duty") on subsidized imports that are found to be hurting domestic producers.

his agreement does two things: it disciplines the use of subsidies, and it regulates the actions countries can take to counter the effects of subsidies. It says a country can use the WTO's dispute settlement procedure to seek the withdrawal of the subsidy or the removal of its adverse effects. Or the country can launch its own investigation and ultimately charge extra duty (known as "countervailing duty") on subsidized imports that are found to be hurting domestic producers.

The agreement contains a definition of subsidy. It also introduces the concept of a "specific" subsidy — i.e. a subsidy available only to an enterprise, industry, group of enterprises, or group of industries in the country (or state, etc) that gives the subsidy. The disciplines set out in the agreement only apply to specific subsidies. They can be domestic or export subsidies.

The agreement defines two categories of subsidies: prohibited and actionable. It originally contained a third category: non-actionable subsidies. This category existed for five years, ending on 31 December 1999, and was not extended. The agreement applies to agricultural goods as well as industrial products, except when the subsidies are exempt under the Agriculture Agreement's "peace clause", due to expire at the end of 2003.

- Prohibited subsidies: subsidies that require recipients to meet certain export targets, or to use domestic goods instead of imported goods. They are prohibited because they are specifically designed to distort international trade, and are therefore likely to hurt other countries' trade. They can be challenged in the WTO dispute settlement procedure where they are handled under an accelerated timetable. If the dispute settlement procedure confirms that the subsidy is prohibited, it must be withdrawn immediately. Otherwise, the complaining country can take counter measures. If domestic producers are hurt by imports of subsidized products, countervailing duty can be imposed.

- Actionable subsidies: in this category the complaining country has to show that the subsidy has an adverse effect on its interests. Otherwise the subsidy is permitted. The agreement defines three types of damage they can cause. One country's subsidies can hurt a domestic industry in an importing country. They can hurt rival exporters from another country when the two compete in third markets. And domestic subsidies in one country can hurt exporters trying to compete in the subsidizing country's domestic market. If the Dispute Settlement Body rules that the subsidy does have an adverse effect, the subsidy must be withdrawn or its adverse effect must be removed. Again, if domestic producers are hurt by imports of subsidized products, countervailing duty can be imposed.

Some of the disciplines are similar to those of the Anti-Dumping Agreement. Countervailing duty (the parallel of anti-dumping duty) can only be charged after the importing country has conducted a detailed investigation similar to that required for anti-dumping action. There are detailed rules for deciding whether a product is being subsidized (not always an easy calculation), criteria for

determining whether imports of subsidized products are hurting ("causing injury to") domestic industry, procedures for initiating and conducting investigations, and rules on the implementation and duration (normally five years) of countervailing measures. The subsidized exporter can also agree to raise its export prices as an alternative to its exports being charged countervailing duty.

Subsidies may play an important role in developing countries and in the transformation of centrally-planned economies to market economies. Least-developed countries and developing countries with less than $1,000 per capita GNP are exempted from disciplines on prohibited export subsidies. Other developing countries are given until 2003 to get rid of their export subsidies. Least-developed countries must eliminate import-substitution subsidies (i.e. subsidies designed to help domestic production and avoid importing) by 2003 — for other developing countries the deadline was 2000. Developing countries also receive preferential treatment if their exports are subject to countervailing duty investigations. For transition economies, prohibited subsidies had to be phased out by 2002.

Safeguards: emergency protection from imports

A WTO member may restrict imports of a product temporarily (take "safeguard" actions) if its domestic industry is injured or threatened with injury caused by a surge in imports. Here, the injury has to be serious. Safeguard measures were always available under GATT (Article 19). However, they were infrequently used, some governments preferring to protect their domestic industries through "grey area" measures — using bilateral negotiations outside GATT's auspices, they persuaded exporting countries to restrain exports "voluntarily" or to agree to other means of sharing markets. Agreements of this kind were reached for a wide range of products: automobiles, steel, and semiconductors, for example.

The WTO agreement broke new ground. It prohibits "grey-area" measures, and it sets time limits (a "sunset clause") on all safeguard actions. The agreement says members must not seek, take or maintain any voluntary export restraints, orderly marketing arrangements or any other similar measures on the export or the import side. The bilateral measures that were not modified to conform with the agreement were phased out at the end of 1998. Countries were allowed to keep one of these measures an extra year (until the end of 1999), but only the European Union — for restrictions on imports of cars from Japan — made use of this provision.

An import "surge" justifying safeguard action can be a real increase in imports (an absolute increase); or it can be an increase in the imports' share of a shrinking market, even if the import quantity has not increased (relative increase).

Industries or companies may request safeguard action by their government. The WTO agreement sets out requirements for safeguard investigations by national authorities. The emphasis is on transparency and on following established rules and practices — avoiding arbitrary methods. The authorities conducting investigations have to announce publicly when hearings are to take place and provide other appropriate means for interested parties to present evidence. The evidence must include arguments on whether a measure is in the public interest.

The agreement sets out criteria for assessing whether "serious injury" is being caused or threatened, and the factors which must be considered in determining the impact of imports on the domestic industry. When imposed, a safeguard measure should be applied only to the extent

necessary to prevent or remedy serious injury and to help the industry concerned to adjust. Where quantitative restrictions (quotas) are imposed, they normally should not reduce the quantities of imports below the annual average for the last three representative years for which statistics are available, unless clear justification is given that a different level is necessary to prevent or remedy serious injury.

In principle, safeguard measures cannot be targeted at imports from a particular country. However, the agreement does describe how quotas can be allocated among supplying countries, including in the exceptional circumstance where imports from certain countries have increased disproportionately quickly. A safeguard measure should not last more than four years, although this can be extended up to eight years, subject to a determination by competent national authorities that the measure is needed and that there is evidence the industry is adjusting. Measures imposed for more than a year must be progressively liberalized.

When a country restricts imports in order to safeguard its domestic producers, in principle it must give something in return. The agreement says the exporting country (or exporting countries) can seek compensation through consultations. If no agreement is reached the exporting country can retaliate by taking equivalent action — for instance, it can raise tariffs on exports from the country that is enforcing the safeguard measure. In some circumstances, the exporting country has to wait for three years after the safeguard measure was introduced before it can retaliate in this way — i.e. if the measure conforms with the provisions of the agreement and if it is taken as a result of an increase in the quantity of imports from the exporting country.

To some extent developing countries' exports are shielded from safeguard actions. An importing country can only apply a safeguard measure to a product from a developing country if the developing country is supplying more than 3% of the imports of that product, or if developing country members with less than 3% import share collectively account for more than 9% of total imports of the product concerned.

The WTO's Safeguards Committee oversees the operation of the agreement and is responsible for the surveillance of members' commitments. Governments have to report each phase of a safeguard investigation and related decision-making, and the committee reviews these reports.

Export taxes, Export subsidies, Economic Integration

One proposal involves a 50% reduction in export subsidies as an immediate down payment, followed by eliminating subsidies completely in three years (for developed countries) or six years (for developing countries).

The proposal from five developing countries is similar but with more emphasis on flexibilities for developing countries. It includes expanding the types of export subsidies that developing countries are currently allowed under Article 9.4 of the Agriculture Agreement. This group's proposed formula would continue reductions at the same pace as under the present agreement while negotiations continue, followed by complete elimination within three years of the negotiations' end or 2006, whichever is earlier — with a longer deadline for developing countries.

These proposals received some support, and some opposition, particularly over the complete elimination of export subsidies.

An alternative proposal includes "rebalancing" — more moderate reductions on some products in return for steeper reductions on other products, with the possibility of raised ceilings — without eliminating export subsidies. Again, this idea has received both support and opposition, some countries predicting that with rebalancing the products they most need to export will face competition from the highest subsidies.

Some countries emphasize matching measures on imports with those on exports. Subsidy reductions would be gradual and not lead to elimination. To match the concept of bound tariffs, export subsidies would be bound per unit (e.g. per ton).

Many countries say other forms of export subsidies (such as food aid, subsidized export credit — see below — and insurance, trading by state enterprises) should be disciplined, and say they will elaborate on this later. Even among the countries that agree on the need to tackle these, there is a difference of opinion as to whether these other forms are a serious as direct export subsidy.

Some smaller developing countries argue that export subsidies should be eliminated but over a longer period of time to help them adjust to higher food import bills. They are calling for stronger measures to help net food-importing developing countries and least developed countries adjust.

Papers or "non-papers" from: The Cairns Group, five developing countries (Nicaragua, Panama, Peru, Venezuela and Zimbabwe), Switzerland, Japan

Export credit

Most delegations who spoke in the negotiations say subsidized export credit (along with export guarantees and insurance, various forms of food aid, activities of state trading enterprises) could be used to circumvent export subsidy commitments. They called for disciplines on the subsidy portion of these measures.

Some say that export subsidy reductions should be negotiated as part of a package that also includes disciplines and reductions in subsidized credit. Others argue that export subsidies are far more serious.

Countries taking a more cautious view of this say they are in favour of disciplines along the lines of those being developed in the OECD, but also argue that export credits do not contain large amounts of subsidies and are useful for food security in importing countries suffering from financial crises or food supply problems.

Export taxes and restrictions

Most participants agree that some disciplines are needed to ensure supplies are available for importing countries. Among the issues that have been raised:
Symmetry between imports and exports: Some countries argue that the disciplines in this subject should be seen as part of balancing measures on the imports with those on exports. Others disagree.

Supporting domestic processing: Several developing countries say taxes or restrictions on raw materials exports are sometimes needed in order to promote domestic processing industries, particularly when importing developed countries charge higher tariffs on processed products than on raw materials ("tariff escalation"). Some countries argue that getting rid of tariff escalation is a better solution.

Prohibited products and national security: Some countries say some restrictions are needed to prevent exports of hazardous and other prohibited products, and for national security reasons. Others disagree.

Single market

You can be in the EU's Single Market, but not the EU, this is what Norway, Iceland and Liechtenstein do.

The European Union's single market is perhaps the most ambitious type of trade co-operation. That's because as well as eliminating tariffs, quotas or taxes on trade, it also includes the free movement of goods, services, capital and people.

That is why there has been no limit on the number of French people who can come to the UK, or the number of British people who can live in Spain - but there are limits on Turks or Ukrainians, for example.

Also, a single market strives to remove so-called "non-tariff barriers" - different rules on packaging, safety and standards and many others are abolished and the same rules and regulations apply across the area.

For goods, the single market was largely completed in 1992, but the market for services remains a work in progress a quarter of a century later. The EU has promised to introduce it many times, but several countries have dragged their feet and it is much more complicated than creating a single market for say, cars or computers. Even so, the City of London dominates financial services in the EU not least because it can do business in every member country.

The EU is therefore not just a free trade area - it is a single market.

But to stay in the single market, countries have to allow the free movement of goods, services, capital and people. That last one means immigration is difficult if not impossible to control - although the UK might get a special deal to allow some limits.

Membership of the single market also normally involves making annual payments towards the EU's budget and accepting the jurisdiction of the European Court of Justice, which would cross quite a few red lines for many Brexiteers.

CUSTOMS UNION

Turkey is part of a customs union with the EU but not in the single market. The deal does not cover food or agriculture, services or government procurement.

The EU is not only a single market - it is also a customs union. The countries club together and agree to apply the same tariffs to goods from outside the union.

Once goods have cleared customs in one country, they can be shipped to others in the union without further tariffs being imposed.

If the UK left the Customs Union but stayed in the Single market, our exporters would have to contend with what are called 'rules of origin'.

These rules are designed to demonstrate that goods that legally originated in the UK - and did not contain more than the maximum permitted level of parts and components from elsewhere - qualify for duty-free entry into the EU.

Free trade area

If we left both the single market and the customs union, we could negotiate a free trade deal with the EU. A free trade area is one where there are no tariffs or taxes or quotas on goods and/or services from one country entering another.

The negotiations to establish them can take years and there are normally exceptions.

So, agriculture and fisheries might be exempted, certain industries protected and some goods may not be covered.

Regional trading agreements refer to a treaty that is signed by two or more countries to encourage free movement of goods and services across the borders of its members. The agreement comes with internal rules that member countries follow among themselves. When dealing with non-member countries, there are external rules in place that the members adhere to.

Quotas, tariffs, and other forms of trade barriers restrict the transport of manufactured goods and services. Regional trading agreements help reduce or remove the barriers to trade.

Types of Regional Trading Agreements

Regional trading agreements vary depending on the level of commitment and the arrangement among the member countries.

1. Preferential Trade Areas

The preferential trading agreement requires the lowest level of commitment to reducing trade barriers, though member countries do not eliminate the barriers among themselves. Also, preferential trade areas do not share common external trade barriers.

2. Free Trade Area

In a free trade agreement, all trade barriers among members are eliminated, which means that they can freely move goods and services among themselves. When it comes to dealing with non-members, the trade policies of each member still take effect.

3. Customs Union

Member countries of a customs union remove trade barriers among themselves and adopt common external trade barriers.

4. Common Market

A common market is a type of trading agreement wherein members remove internal trade barriers, adopt common policies when it comes to dealing with non-members, and allow members to move resources among themselves freely.

5. Economic Union

An economic union is a trading agreement wherein members eliminate trade barriers among themselves, adopt common external barriers, allow free import and export of resources, adopt a set of economic policies, and use one currency.

6. Full Integration

The full integration of member countries is the final level of trading agreements.

Benefits of Regional Trading Agreements

Regional trading agreements offer the following benefits:

1. Boosts Economic Growth

Member countries benefit from trade agreements, particularly in the form of generation of more job opportunities, lower unemployment rates, and market expansions. Also, since trade agreements usually come with investment guarantees, investors who want to invest in developing countries are protected against political risk

2. Volume of Trade

Businesses in member countries enjoy greater incentives to trade in new markets, thanks to attractive trading conditions due to the policies included in the agreements.

3. Quality and Variety of Goods

Trade agreements open a lot of doors for businesses. As they gain access to new markets, the competition becomes more intense. The increased competition compels businesses to produce higher quality products. It also leads to more variety for consumers. When there is a wide variety of high-quality products, businesses can improve customer satisfaction.

Foreign Exchange

Foreign Exchange refers to currencies and other instruments of payment denominated in other countries' currencies.

Terms and Definitions

An Exchange rate can be defined as the number of units of one currency that must be given to acquire one unit of a currency of another country. It is the price paid in the home currency to purchase a certain quantity of funds in the currency of another country. It is therefore the link between different national currencies that makes international price and cost comparisons possible.

If the rate is quoted for current foreign currency transactions, it is called the spot rate. The spot rate applies to interbank transactions for delivery within two business days or immediate delivery for over-the-counter transactions that usually involve non-bank customers.

If the rate is quoted for delivery of foreign currency in the future, it is called the forward rate. This is a contractual rate between the foreign exchange trader and the trader's client.

The **spread** in the spot market is the difference between the bid (buy) and offer (sell) rates quoted by the foreign exchange trader.

The **forward spread** is the difference between the spot and forward exchange rates.

The **direct quote** is the number of units of the domestic currency for one unit of the foreign currency.

The **indirect quote** is the number of units of the foreign currency for one unit of the domestic currency.

The **cross rate** is an exchange rate computed from two other exchange rates.

Determinants of Foreign Currency

The demand for foreign currency is fixed by the supply and demand curve (just like any other commodity in an open market). The demand for foreign currency arises from the traders who have to make up payments for imported goods. The supply arises from those who have exported goods and services abroad. This depends largely on how much foreigners are willing to buy goods and services from a particular country.

Factors Affecting Exchange Rates

1. Export/Imports

If a country exports more goods, the importing country will have a higher demand for the currency of the exporting country so as to meet its obligation. The value of the currency of the exporting country will therefore appreciate. The opposite is the case if a country imports more goods than exports.

2. Political Stability

Unsuitable political climate will make the citizens lose confidence in their currency. They would therefore wish to invest or just buy the currency of the other countries they deem to be stable. In so doing, the demand for currency of more political stable countries will appreciate as compared to those of politically unstable countries.

3. Inflation rate differential (purchasing power parity theorem)

Parity between the purchasing powers of two currencies establishes the rate of exchange between the two currencies. When inflation rate differential between two countries changes, the exchange rate also adjusts to correspond to the relative purchasing powers of the currencies.

5. Balance of Payment

The term balance of payment refers to a system of government accounts that catalogues the flow of economic transactions between the residents of one country and the residents of other countries. It is therefore the fund flow statement.

Continuous deficit in the balance of payments is expected to depress the value of a currency because such deficit would increase the supply of that currency relative to its demand.

6. Government Policies

A national government may through its Central Bank intervene in the foreign exchange market, buying and selling its currency as it sees fit to support its currency relative to others. In order to promote cheap export, a country may maintain a policy of undervaluing its currency.

Foreign Exchange Rate Determination

- A foreign exchange rate is the rate at which one currency is exchanged for another. Thus, an exchange rate can be regarded as the price of one currency in terms of another.

on 01 Apr 2020.

$1 = Rs. 76.575

- In India the free exchange rate regime is prevailed. Foreign exchange rate is determined on the basis of Demand and Supply theory.

Forces Behind Exchange Rate Determination

Foreign Exchange is a price of one country currency in relation to other country currency, which like the price of any other commodity is determined by the demand and supply factors. The demand and supply of the foreign exchange rate come from the residents of the respective countries.

Demand for Foreign Exchange	**Supply of Foreign Exchange**
1. Foreign currencies is required for the purchase of foreign goods and services (IMPORTS).	1. Foreign currencies is supplied on the sale of foreign goods and services (Export).
2. Foreign currency is needed to foreign country assets/ markets, Assets, Bonds etc. shares/bonds etc.	2. Foreigners investing in Indian Stock invest in markets, Assets, Bonds etc. (FPIs And FDIs)
3. Indians Travelling abroad for Tourism Purpose.	3. Foreigners travelling to India.

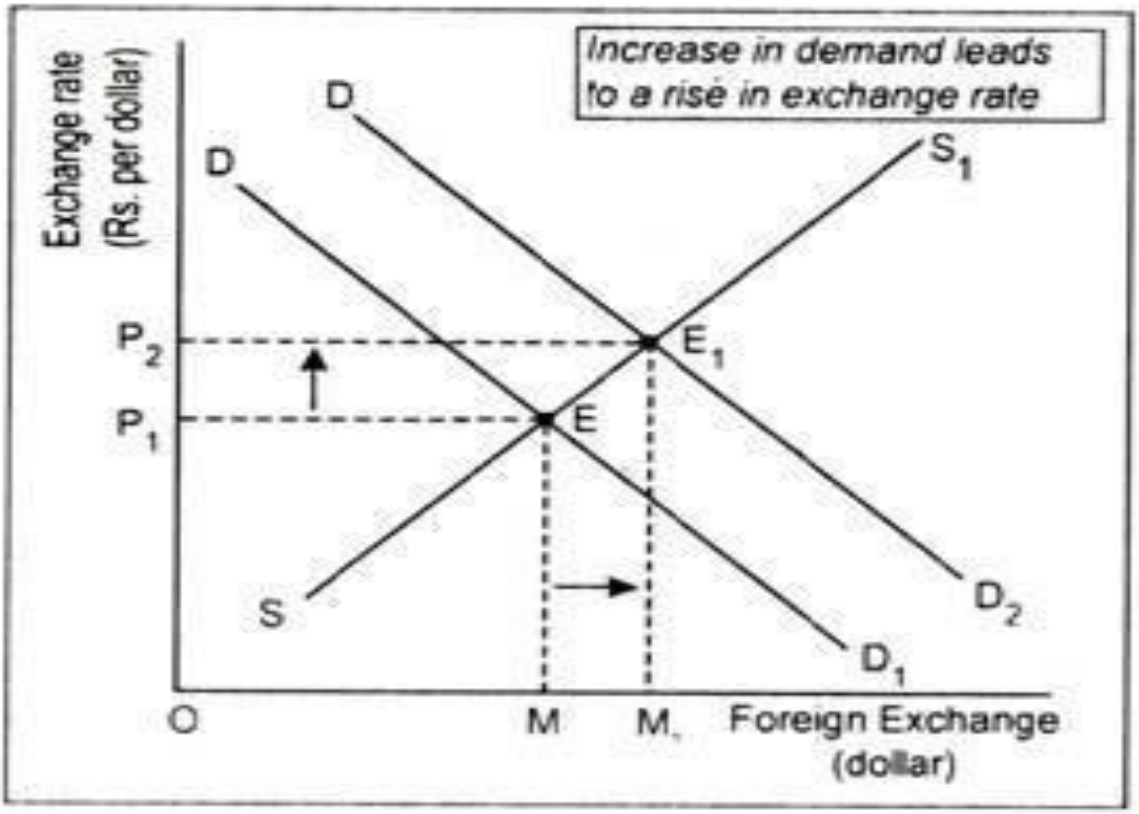


Fig. 5.5: Equilibrium Exchange Rate

- If at the point OP1 the value of

50 Rs. = 1 $ or 1$ =50 Rs.

- When the demand of the dollar will increase , dollar appreciates from Rs. 50 = $1 to Rs. 53 = $1, while rupee depreciates from $1 = Rs. 50 to $1 = Rs. 53.

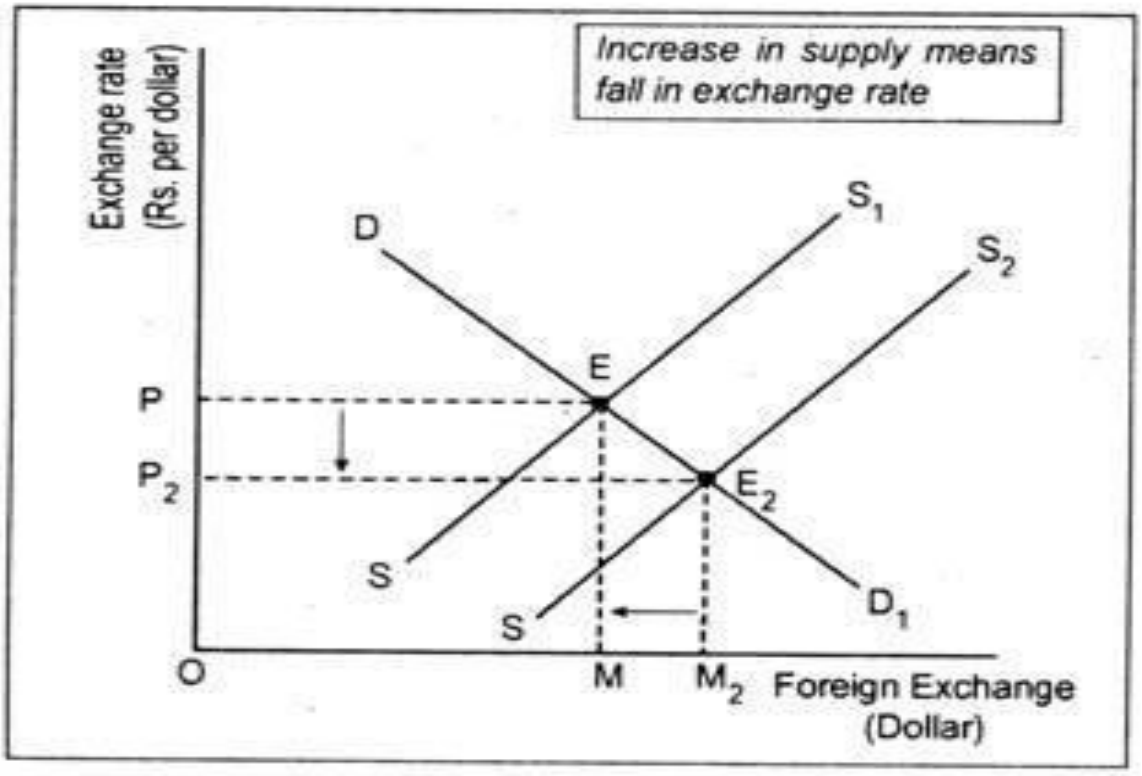


Fig. 5.6 : Equilibrium Exchange Rate

- If at the point OP the value of

50 Rs. = 1 $ or 1$ =50 Rs.

- When the supply of the dollar will increase, dollar depreciate from Rs. 50 = $1 to Rs. 48 = $1, while rupee appreciate from $1 = Rs. 50 to $1 = Rs. 48.

Exchange Rate Management in India

Over the last six decades since independence the exchange rate system in India has transited from fixed exchange rate regime to floating rate regime.

1. Par Value System (1974-1971): After Independence Indian followed the 'Par Value System' whereby the rupee's external par value was fixed with gold and UK pound sterling.
2. Pegged Regime (1971-1991): India pegged its currency to the US dollar (1971-1991) and to pound (1971-75). Following the breakdown of Breton Woods system, the value of pound collapsed, and India witnessed misalignment of the rupee. To overcome the pressure of devaluation India pegged its currency to a basket of currencies. During this period, the exchange rate was officially determined by the RBI within a nominal band of +/- 5 percent of the weighted average of a basket of currencies of India's major trading partners.

3. The period since 1991 -1993: The transition to market-based exchange rate was in response to the BOP crisis of 1991. As a first step towards transition, India introduces partial convertibility of rupee in 1992-93 under LERMS.
   Liberalized Exchange Rate Management System (LERMS): The LERMS involved partial convertibility of rupee. Under this system, India followed a dual exchange rate policy, where
   40 converted at the official exchange rate and the remaining

   60% converted at the market-based exchange rate

4. Market-Based Exchange rate Regime (1993- till present): The LERMS was a transitional mechanism to provide stability during the crisis period. Once the stability is achieved, India transited from LERMS to a full flash market exchange rate system. As a result, since 1993, exchange rate fluctuations are marker determined. In the 1994 budget, 60:40 ratio was removed, and 100 percent conversion at market-based rate was allowed for all goods and capital movement

Exchange Rate Exposure

The extent to which a firm is exposed or vulnerable to fluctuations in exchange rate is referred to as the exchange rate exposure and can be perceived in three different ways:

Transaction exposure

This defines the foreign exchange rate risk in terms of the impact of exchange rate movement on the firm's future cash flows. This type of exposure arises from an obligation to either accept or deliver foreign currency at a future date. The most important transactions leading to transaction exposure are accounts receivable and accounts payables denominated in foreign currency.

Translation Exposure

Translation exposure defines exchange rate risk in terms of the impact of exchange rate movement on the financial statement of the firm. When a business is organized as several separate corporations, then financial statements must be filed on a consolidated basis so as to give shareholders concise and complete information as to the financial position and the operating performance of the firm as a whole. When subsidiary operate in a foreign country then major complications occur in consolidation process. This problem arises from the fact that financial statements of the foreign subsidiary are usually in a currency which is different form that of the parent company. The foreign currency must be converted into the home currency before accounts can be consolidated. Translation exposure therefore is the extent to which multinational firms consolidated financial statements are affected by the need to convert its foreign subsidiary accounts to the home currency. As the value of the exchange rate fluctuates, so would be the value of the foreign subsidiary.

Economic Exposure

Economic exposure defines exchange rate risk as the total impact on all the cash flow of the firm (both contractual and non-contractual) It is broader than the other types of exposure and may be considered to be the overall impact of the foreign exchange fluctuations on the shareholders wealth. It affects both the companies that enter into foreign currency transactions and those that do not.

Management of Transaction Exposure

Non-Contractual Techniques

Several non-contractual techniques may be used. These include:

Undertaking transactions denominated in home currency only.

1. Entering into transactions denominated in foreign currency which is considered to be stable. E.g. dollar, sterling pound, Yen, etc.
2. The use of leads or lags. Leads are advance payments while lags are delayed payments.

Contractual Techniques

Contractual techniques include forward exchange rates, money market hedge currency options, currency futures and swaps. These techniques are explained below:

Forward Exchange Contract

A forward exchange contract is an immediate, firm and binding contract between the bank and its customer for the purchase or sale of a specified quantity of a stated foreign currency at a rate of exchange fixed when the contract is made but requiring performance at a specified future date.

A forward exchange contract can either be fixed or option. A fixed forward exchange contract requires performance to take place on a specified future date. While an option forward exchange contract requires performance to take place at any date between two specified dates

Quoting a forward rate

Forward exchange rate might be higher or lower than the spot rate. If it is higher, then the quoted currency would be cheaper forward than spot (using indirect quote)

Closing Out A Forward Exchange Contract

When the time to carry out the transaction in a forward exchange contract is due but the party buying or selling the foreign currency does not have the required currency, then the party may organize a cross out of the contract. If the customer had contracted to sell foreign currency to the bank but cannot perform his part of the contract, then the bank will sell the currency at the spot rate to the customer and then buy it back at the agreed rate. If the difference in this transaction is a

loss (on the part of the customer), then the bank is compensated by the customer to offset the loss. If there is a gain then the bank compensates the customer.

Money-Market Hedge

An exporter who invoices foreign customers in foreign currency can hedge against the exchange risk by:

- Borrowing an amount in foreign currency immediately
- Converting the foreign currency to domestic currency at the spot rate
- Repaying the loan and interest out of the foreign currency received from the customer

Similarly, if a company has to make foreign currency payment in the future, it can buy the currency now at the spot rate and put it in a foreign currency deposit account. Eventually the company should use the principle and interest earned to make the payment when they fall due.

Currency Option

A major drawback of a forward exchange contract is that it's a binding contract which must be performed. Some investors may be uncertain about the earnings they will make in several months' time and therefore would be unable to enter into a forward exchange contract without the risk of contraction to sell more or less than they will receive.

The use of a currency option overcomes this problem. A currency option is an agreement that gives the holder the right but not the obligation to buy or sell a certain quantity of foreign currency at a specified exchange rate at a specified future time.

Currency options are useful to companies in the following situations.

When there is uncertainty about foreign currency receipt or payment either in timing or amount. If the foreign exchange transaction does not materialise then the currency option can be sold in the market (if it has any value) or it can be exercised if it will make a profit

- It can be used to support a tender for an overseas contract priced in foreign currency.
- It can be used to allow publication of price-lists for goods in foreign currency.
- It can be used to protect the imports or exports of price sensitive goods.

Currency Futures

A financial future is a standard contract between a buyer and a seller in which a buyer has a binding obligation to buy a fixed amount (i.e. the contract size) at a fixed price (the future price), on a fixed date (delivery date or the expiration date) of some underlying assets. E.g. if we bought sterling pound futures than we will have a binding obligation to buy a fixed amount of sterling pound at a fixed rate at a fixed date. Similarly a seller would have a binding obligation to deliver a sterling pound. This is similar to a forward exchange contract to buy sterling pound from a bank.

However, certain important differences exist. These are:

- Each currency future is traded in units of a fixed size such that fractions of contracts cannot be bought or sold.

- Whereas forward exchange contract with banks can be drawn up for any date in future, delivery date for currency futures occur only on 4 dates per year, (March, June, September and December). This may appear to be a severe restriction but in practice most future contracts are sold before they reach maturity.

- A financial future exchange offers a physical meeting place for buyers and sellers. Dealing on floor between member firms is by open outcry.

- Transaction costs on future exchange are paid as a percentage commission.

- Buyers and sellers are required to deposit margins to ensure credit worthiness. Profit or losses on contracts are also received and paid throughout the life of the future.

Management of Forex Risk

Hedging

It is the technique by which a person can minimize or reduce the risk which arises due to the change in the foreign exchange rate. There are 2 techniques of Hedging

1. **Internal Techniques**

a. **Invoice in home currency: in this technique company make the payment and receive the payment in its home currency.**

b. **Leading and lagging: Importer can delay the payment**

Exporter can make the payment immediately

c. **Matching:** When a company has receipts and payments in the same foreign currency due at the same time.

d. **Decide to do nothing:** The company would "win some, lose some".

Theory suggests that, in the long run, gains and losses net off and leave a similar result to that if hedged.

2. External Hedging Techniques

a. Forward contracts

The forward market is where you can buy and sell a currency, at a fixed future date for a predetermined rate, i.e. the forward rate of exchange. This effectively fixes the future rate.

b. Futures contracts

Futures contracts are standard sized, traded hedging instruments.

The aim of a currency futures contract is to fix an exchange rate at some future date, subject to basis risk.

Role of Participants in Foreign Exchange Market

The participants are:

1. Commercial Banks or Market Makers:

Commercial banks are normally taking over the position to support the economy of the country by carrying over the foreign currency from one period to another, for meeting the future need of the country. They are also sometime making short sale (agree to sell or actually sell the foreign currency without any real capacity to sell through or borrow the required currency from others) of foreign currency to satisfy the need of firms to make payments.

Later on to bring the position in equilibrium, they quote the rates for buying and selling of foreign currency accordingly. As they are buying the foreign currency from the customer, the rate they quote for buying the foreign currency is technically named as Bid rate. When they sell the foreign currency to customer, the rate they quote is technically known as Ask rate.

2. Foreign Exchange Brokers:

FE brokers do not buy or sell the foreign currency on their own account, as done by market makers. They are working as an intermediary between two parties, to satisfy their respective needs. As they are working as a bridge between buyers and sellers of the foreign currency, they are only earning the fees in the form of brokerage charges.

3. Central Banks or Reserve Bank of India:

To protect the financial strength and stability of the country's balance of payments, internal money supply, interest rates and inflation, RBI intervenes in the foreign exchange markets to protect the disequilibrium in the prices of foreign exchange conversion.

4. Corporates (MNCs) and Entrepreneurs:

Corporate are the players in the FE market, to satisfy their need of payment in foreign currency towards imports of goods, commodities and services. On the opposite way, they need to convert foreign currency in home currency on account of export of goods, commodities, and services. The need of conversion also happens on account of transactions in financial markets across the globe, for loan disbursement, repayment of loans, receipt and payment of annual charges, etc.

Arbitrage

Arbitrage is the process of a simultaneous sale and purchase of currencies in two or more foreign exchange markets with an objective to make profits by capitalizing on the **exchange-rate differentials** in various markets.

The arbitrage opportunities exist due to the **inefficiencies of the market**. While dealing in the arbitrage trade, an individual can make profits only out of price differences of similar or identical financial instruments traded on different exchange markets. Thus, the **price differential is captured as a trade's net payoff.** This payoff should be large enough to cover the expenses incurred in executing the trade.

For example: Suppose the stock of company A is trading at Rs 2000 on BSE while the same stock is trading on NSE at Rs 2500. A trader can earn a profit of Rs 500 by buying the stock on BSE and immediately selling the same shares on NSE. This arbitrage opportunity can be availed until BSE runs out of shares of company A or until BSE and NSE adjusts the price differences so as to wipe out the arbitraging opportunity.

The importance of arbitrage lies in its ability to correspond foreign exchange rates in all the major foreign exchange markets. The arbitraging involves the transfer of foreign exchange from the market with a lower exchange rate to the market with a higher exchange rate. Hence, arbitraging equates the demand for foreign exchange with its supply, thereby acting as a stabilizing factor in the exchange markets.

The arbitrage opportunity can be availed only where the foreign exchange is free from controls, and if any, controls should be of limited significance. If the sale and purchase of foreign exchange are under severe control and regulation, then the arbitrage is not possible. Practically, the arbitrage opportunity exists for a very brief period since in the mature markets the most of the trading has been taken by the algorithm-based trading *(a trading system that relies heavily on mathematical formulas and computer programs to determine the trading strategies).* These algorithm-based trading are quick to spot and is quite easy for a trader to keep track.

Another forex arbitrage includes:

Currency arbitrage involves the exploitation of the differences in quotes rather than movements in the exchange rates of the currencies in the currency pair.

- A cross-currency transaction is one that consists of a pair of currencies traded in forex that does not include the U.S. dollar. Ordinary cross currency rates involve the Japanese yen. Arbitrage seeks to exploit pricing between the currency pairs, or the cross rates of different currency pairs.
- In covered interest rate arbitrages the practice of using favourable interest rate differentials to invest in a higher-yielding currency, and hedging the exchange risk through a forward currency contract.
- An uncovered interest rate arbitrage involves changing a domestic currency which carries a lower interest rate to a foreign currency that offers a higher rate of interest on deposits.
- Spot-future arbitrage involves taking positions in the same currency in the spot and futures markets. For example, a trader would buy currency on the spot market and sell the same currency in the futures market if there is a beneficial pricing discrepancy.

Forex Arbitrage Challenges

Some circumstances can hinder or prevent arbitrage. A discount or premium may result from currency market liquidity differences, which is not a price anomaly or arbitrage opportunity, making it more challenging to execute trades to close a position. Arbitrage demands rapid execution, so a slow trading platform or trade entry delays can limit opportunity. Time sensitivity and complex trading calculations require real-time management solutions to control operations and performance. This need has resulted in the use of automated trading software to scan the markets for price differences to execute forex arbitrage.

Forex arbitrage often requires lending or borrowing at near to risk-free rates, which generally are available only at large financial institutions. The cost of funds may limit traders at smaller banks or brokerages. Spreads, as well as trading and margin cost overhead, are additional risk factors.

Currency market and basic Central Bank operation

Foreign exchange intervention

Foreign exchange intervention is the process whereby a central bank buys or sells foreign currency in an attempt to stabilize the exchange rate, or to correct misalignments in the forex market. This is often accompanied by a subsequent adjustment, by the central bank, to the money supply to offset any undesirable knock-on effects in the local economy.

The mechanism mentioned above, is referred to as “sterilized intervention” and will be discussed later on, along with the other currency intervention methods.

How forex traders can trade a central bank intervention

Traders must keep in mind that when central banks intervene in the forex market, moves can be extremely volatile. Therefore, it is essential to set an appropriate risk to reward ratio and make use of prudent risk management.

Central banks intervene in the forex market when the current trend is in the opposite direction to where the central bank desires the exchange rate to be. Therefore, trading around central bank intervention is a lot like trading reversals.

Additionally, the forex market tends to anticipate central bank intervention meaning that it is not uncommon to see movements against the long-term trend in the moments leading up to central bank intervention. Since there is no guarantee that traders can look for the new trend to emerge before placing a trade.

Why do central banks intervene in the foreign exchange market?

Central banks generally agree that intervention is necessary to stimulate the economy or maintain a desired foreign exchange rate. Central banks will often buy foreign currency and sell local currency if the local currency appreciates to a level that renders domestic exports more expensive to foreign nations. Therefore, central banks purposely alter the exchange rate to benefit the local economy.

Below is an example of successful central bank intervention in response to Japanese Yen strength against the US dollar. The Bank of Japan was of the view that the exchange rate was unfavourable and swiftly intervened to depreciate the Yen thus, resulting in a move higher for the USD/JPY pair. The intervention took place in the timespan depicted by the blue circle and the effect was realised shortly thereafter.

USD/JPY BOJ central bank intervention

While most central bank intervention is successful, there are instances when this in not the case. The chart below depicts a currency intervention example in the USD/BRL (Brazilian Real) currency pair. The chart highlights both instances where the central bank intervened to stop the decline in the Brazilian Real. It is clear to see that both scenarios failed to immediately strengthen the Real against the US dollar as the dollar continued to rise higher and higher.

Foreign exchange intervention failure (USD/BRL)

How does currency intervention work

Central banks have a choice of different types of interventions to make use of. These can either be direct or indirect. Direct intervention, as the name suggests, has an immediate effect on the forex market, while indirect intervention achieves the objectives of the central bank via less invasive means. Below are examples of direct and indirect intervention:

Types of intervention direct or indirect

Jawboning Indirect

Operational Intervention Direct

Concerted Intervention Direct and indirect

Sterilized InterventionDirect

Operational Intervention: This is usually what people mean when they refer to central bank intervention. It involves the central bank buying and selling both foreign and local currency to drive the exchange rate to a targeted level. It is the pure size of these transactions that move the market.

Jawboning: this is an example of indirect FX intervention whereby a central bank mentions that it may intervene in the market if the local currency reaches a certain undesirable level. This method, as the name suggests, is more about talking than actual intervention. With the central bank ready to intervene, traders take it upon themselves to collectively bring the currency back to more acceptable levels.

Concerted Intervention: This is a combination of jawboning and operational intervention and is most effective when multiple central banks voice the same concerns over exchange rates. If a number of central banks increase their jawboning efforts, it is likely that one of them actually conducts operational intervention to drive the exchange rate in the desired direction.

Sterilized intervention: Sterilized intervention involves two actions from the central bank in order to influence the exchange rate and at the same time, leave the monetary base unchanged. This involves two steps: The sale or purchase of foreign currency, and an open market operation (selling or buying government securities) of the same size as the first transaction.

Product market approach to determination of exchange rate

Asset Approach to Exchange Rate Determination

Exchange rates are used to compare international prices of goods and services. They are also used to compare the return on foreign currency-denominated stocks and bonds to the return on domestic assets. In the 1970s, the stress was on the monetary approach to balance of payments.

The focus of attention in this approach was on international trade flows as primary determinants of exchange. One reason for this was that up to 1960s, government's maintained tight restrictions on international flow of financial capital.

The role of exchange rate changes in dominating international trade imbalances suggests that countries with current trade surpluses should have an appreciat•ing currency whereas countries with trade deficits should have depreciating currencies. Such exchange rate changes would lead to changes in international relative prices that would work to eliminate the trade imbalances like surplus or deficit**.**

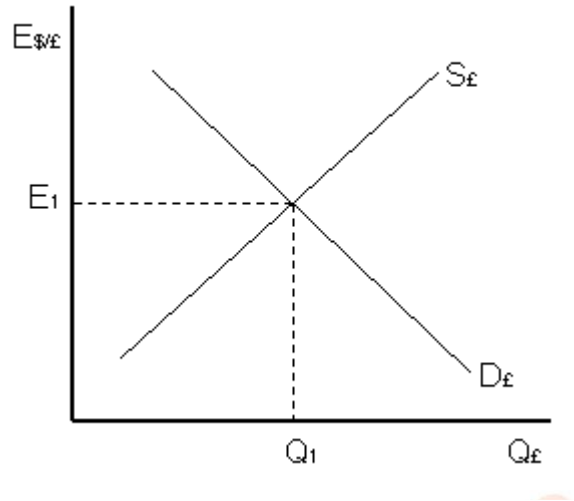
The interest parity condition can be used to develop a model of exchange rate determination. That is, investor behaviour in asset markets which generates interest parity can also explain why the exchange rate may rise and fall in response to market changes.

The first step is to reinterpret the rate of return calculation described above in more general (aggregate) terms. Thus instead of using the interest rate on a one year CD, we will interpret the interest rates in the two countries as the average interest rates currently prevailing. Similarly, we will imagine that the expected exchange rate is the average expectation across many different individual investors. The rates of return then are the average expected rates of return on a wide variety of assets between the two countries.

Next we imagine that investors trade currencies in the foreign exchange market. Each day some investors come to a market ready to supply a currency in exchange for another while others come to demand currency in exchange for another.

Consider the market for British pounds (£) in New York depicted in the adjoining diagram. We measure the supply and demand of £s along the horizontal axis and the price of £s (i.e. the exchange rate E$/£) on the vertical axis. Let S£ represent the supply of £s in exchange for dollars at all different exchange rates that might prevail. The supply is generally by British investors who demand dollars to purchase dollar denominated assets. However, supply of £s might also come from US investors who decide to convert previously acquired £ currency. Let D£ the demand for £s in exchange for dollars at all different exchange rates that might prevail. The demand is generally by US investors who supply dollars to purchase £ denominated assets. Of course, demand might also come from British investors who decide to convert previously purchased dollars. Recall that which implies that as E$/£ rises RoR£ falls. This means that British investors would seek to supply more £s at higher £ values but US investors would demand fewer £s at higher £ values. This explains why the supply curve slopes upward and the demand curve slopes downward.

The intersection of supply and demand specifies the equilibrium exchange rate, E1, and the quantity of £s, Q1, traded in the market.



Exchange market stability

Influencing exchange rates of currencies by the authorities which issue them is a common phenomenon in the modern global economy. At its base, there is primarily a conviction of the need for more stable environment for international economic flows. In the case of the European Union member states, another reason for shaping the exchange rate emerges – its stability is one of the convergence criteria, which determine the possibility of joining the euro zone. The objective of this paper is the presentation of the results of an analysis how this criterion is met by the EU countries which do not use the common currency yet and the indication of the elementary conditions that affect their ability to fulfil it. In the first part of the article, several determinants arising from the provisions of European law and from their implementation in practice are signalled, and then a focus is made on a brief analysis of statistical data.

Influencing the exchange rate and the Maastricht Treaty Economic authorities influence the exchange rate in order to achieve two main, direct goals – to adjust it in the desired direction and to stabilise it. The former of these objectives is not the subject of this study, however, the consequences of changes in the exchange rate are widely analysed in available literature. In turn, stabilising the national currency's relation against other means of payment also carries a number of economic consequences. Moreover, their occurrence is very often the primary intention of shaping the exchange rate. A basic effect of the stabilisation of the relation between the national means of payment and other currencies is a higher level of certainty in international flows. A low degree of national currency's value fluctuations causes that entities maintaining economic relations with foreign countries may take long-term decisions less burdened with the exchange rate risk. This kind of risk often represents a barrier to entry by domestic companies on the path of internationalisation1 . Choosing to enter new markets or to start up production in other countries is certainly easier when the authorities conduct effective and responsible currency policy, focused on the stabilisation of the exchange rate. A similar dependence also applies to investors on financial markets. Admittedly, in practice, because of the enormous value of speculative capital pouring between countries, in the face of significant tensions or crises, central banks have been – and

probably will be – helpless. Nevertheless, a declaration of credible monetary authorities to aim at maintaining the exchange rate at a constant level contributes undoubtedly to less uncertainty in making investment decisions on the global financial market. Therefore, in this dimension, an appro priate – i. e. resulting in stabilisation – exchange rate policy supports the achievement of a general economic policy goal, which is the national income growth, due to foreign investment and trade expansion of domestic entities. These premises – among others – are reflected in the Maastricht Treaty, in determining the criteria to be met by countries aspiring to the euro zone. The Treaty states that a condition for full participation in Economic and Monetary Union is "the observance of the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System, for at least two years, without devaluing against the currency of any other Member State "and „without severe tensions" . In practice, this means the necessity of formal country's accession to the ERM2 mechanism and maintaining during the designated period the stable exchange rate of own currency within ap pointed bands (generally, ±15% in relation to a fixed central rate). A quite controversial issue was once an answer to the question whether this condition, formulated casually in the Treaty as keeping the exchange rate within the range set by the European Monetary System, requires official accession to the mechanism. There were proposals to consider this criterion to be met if the currency of a country which has not even for molly joined ERM2, during a two-year period was characterised by prescribed stability. This was to eliminate possible speculative attacks that might arise in the case of a formal authorities' declaration to keep the exchange rate tight. However, the deliberation was cut short by the Community bodies which are to recognise the fulfilling the convergence criteria by a country6 and the discussion on this subject subsided. Thus, the Tractate provisions and the practice indicate that this criterion requires that a candidate country to the euro zone for at least two years: – has formally been a member of ERM2, – has not devaluated its currency on own initiative (a revaluation or a devaluation on the initiative of other parties is not prohibited), – has maintained its currency's market rate in the band of ±15% in relation to the central rate – respect ing such a fluctuation band is necessary but not sufficient, because in addition it is required that the country: – has avoided "severe tensions" with regard to the rate of its currency. It should be emphasized that according to the Treaty, the EU member countries that kept their own currencies – even those where entering the euro zone is not a priority – are obliged to treat their exchange rate policy as "a matter of common interest" . Such a general recommendation was explained in the European Council's resolution of 1997, dedicated to defining the regulations of a new exchange rate mechanism (i. e. ERM2), which came into An Overview to the Exchange Rate Stability as a Criterion of the Accession to the Euro Zone 123 force on the beginning of 1999. The resolution stated that the ERM2 would connect national currencies to the euro and would function basing on stability-oriented eco nomic policies of the Community member states. At the same time, it delegated competences to constitute operating procedures for the mechanism to the European Central Bank, in cooperation with the national central banks outside the euro zone .

Unit -4

Fixed and flexible rates

(a) Fixed Exchange Rate

This is that rate at which the value of a currency remains stable vis-a-vis other currencies for a long period of time. A fixed exchange rate, sometimes called a pegged exchange rate, is a type of exchange rate regime where a currency's value is fixed against the value of another single currency, to a basket of other currencies, or to another measure of value, such as gold. A fixed exchange rate is usually used to stabilize the value of a currency against the currency it is pegged to. This makes trade and investments between the two currency areas easier and more predictable, and is especially useful for small economies in which external trade forms a large part of their GDP. It can also be used as a means to control inflation. However, as the reference value rises and falls, so does the currency pegged to it. These rates of exchange are fixed by the Central Bank through the process of pegging the currency concerned e.g. if the currency is pegged to a Dollar, then its value remains fixed to the value of the dollar and will move with movement in the value of the dollar.

Advantages of Using Fixed Exchange Rates

1. It stabilizes the export proceeds and therefore it may stimulate exports for the period in which it is fixed.
2. Foreign investors gauge the return on their investments in local currency vis-a-vis their own currencies. A fixed exchange rate will assure these investors of a stable return on their investment which may induce foreign investors, thus increasing the inflow of foreign exchange to the country.
3. It enables the government to meet its development plans whose budgets are set in local currencies but may be financed by foreign loans and aid.
4. It may keep inflation under control because the prices of imported goods will remain stable as long as the exchange rate is fixed. This is particularly true for imported inflation (Inflation due to an increase in the price of imports. As the price of imports increase, prices of domestic goods using imports as raw materials also increase, causing an increase in the general prices of all goods and services. Imported inflation may be caused by foreign price increases or depreciation of a country's exchange rate).
5. Long term investment plans can be worked out with substantial accuracy and may minimize budget deficits with their negative effects.

Arguments in Favour of a Fixed Rate

1. Reduced risk in international trade - By maintaining a fixed rate, buyers and sellers of goods internationally can agree a price and not be subject to the risk of later changes in the exchange rate before contracts are settled. The greater certainty should help encourage investment.
2. Introduces discipline in economic management - As the burden or pain of adjustment to equilibrium is thrown onto the domestic economy then governments have a built-in incentive not to follow inflationary policies. If they do, then unemployment and balance of payments problems are certain to result as the economy becomes uncompetitive.
3. Fixed rates should eliminate destabilising speculation - Speculation flows can be very destabilising for an economy and the incentive to speculate is very small when the exchange rate is fixed.

Disadvantages of the Fixed Exchange Rate

- **No automatic balance of payments adjustment** - A floating exchange rate should deal with a disequilibrium in the balance of payments without government interference, and with no effect on the domestic economy. If there is a deficit then the currency falls making you competitive again. However, with a fixed rate, the problem would have to be solved by a reduction in the level of aggregate demand. As demand drops people consume less imports and also the price level falls making you more competitive.

- **Large holdings of foreign exchange reserves required** - Fixed exchange rates require a government to hold large scale reserves of foreign currency to maintain the fixed rate - such reserves have an opportunity cost.

- **Loss of freedom in your internal policy** - The needs of the exchange rate can dominate policy and this may not be best for the economy at that point. Interest rates and other policies may be set for the value of the exchange rate rather than the more important macro objectives of inflation and unemployment.

- **Fixed rates are inherently unstable** - Countries within a fixed rate mechanism often follow different economic policies, the result of which tends to be differing rates of inflation. What this means is that some countries will have low inflation and be very competitive and others will have high inflation and not be very competitive. The uncompetitive countries will be under severe pressure continually and may, ultimately, have to devalue. Speculators will know this and thus creates further pressure on that currency and, in turn, government.

(b) Floating Exchange Rate

A floating exchange rate or fluctuating exchange rate is a type of exchange-rate regime in which a currency's value is allowed to fluctuate according to the foreign-exchange market. A

currency that uses a floating exchange rate is known as a floating currency. A floating currency is contrasted with a fixed currency.

When the rate of exchange of a currency is floating, it is left to move in response to different forces (especially the balance of payments). It is left to be determined by the forces of demand and supply of foreign currencies of a given currency.

This rate may discourage investment by foreign investors as they are uncertain about the return to be earned on investment made under floating rates of exchange. It may also discourage export trade and may increase inflation rates.

Arguments in Favour of a Floating Exchange Rate

- **Automatic balance of payments adjustment** - Any balance of payments disequilibrium will tend to be rectified by a change in the exchange rate. For example, if a country has a balance of payments deficit then the currency should depreciate. This is because imports will be greater than exports meaning the supply of sterling on the foreign exchanges will be increasing as importers sell pounds to pay for the imports. This will drive the value of the pound down. The effect of the depreciation should be to make your exports cheaper and imports more expensive, thus increasing demand for your goods abroad and reducing demand for foreign goods in your own country, therefore dealing with the balance of payments problem. Conversely, a balance of payments surplus should be eliminated by an appreciation of the currency.

- **Freeing internal policy** - With a floating exchange rate, balance of payments disequilibrium should be rectified by a change in the external price of the currency. However, with a fixed rate, curing a deficit could involve a general deflationary policy resulting in unpleasant consequences for the whole economy such as unemployment. The floating rate allows governments freedom to pursue their own internal policy objectives such as growth and full employment without external constraints.

- **Absence of crises** - Fixed rates are often characterized by crises as pressure mounts on a currency to devalue or revalue. The fact that, with a floating rate, such changes are automatic should remove the element of crisis from international relations.

- **Flexibility** - Post-1973 there were great changes in the pattern of world trade as well as a major change in world economics as a result of the OPEC oil shock. A fixed exchange rate would have caused major problems at this time as some countries would be uncompetitive given their inflation rate. The floating rate allows a country to re-adjust more flexibly to external shocks.

- **Lower foreign exchange reserves** - A country with a fixed rate usually has to hold large amounts of foreign currency in order to prepare for a time when they have to defend that fixed rate. These reserves have an opportunity cost.

Disadvantages of the Floating Rate

- **Uncertainty** - The fact that a currency changes in value from day to day introduces instability or uncertainty into trade. Sellers may be unsure of how much money they will receive when they sell abroad or what their price actually is abroad. Of course, the rate changing will affect price and thus sales. In a similar way importer never know how much it is going to cost them to import a given amount of foreign goods. This uncertainty can be reduced by hedging the foreign exchange risk on the forward market.

- **Lack of investment** - The uncertainty can lead to a lack of investment internally as well as from abroad.

- **Speculation** - Speculation will tend to be an inherent part of a floating system and it can be damaging and destabilising for the economy, as the speculative flows may often differ from the underlying pattern of trade flows.

- **Lack of discipline in economic management** - As inflation is not punished there is a danger that governments will follow inflationary economic policies that then lead to a level of inflation that can cause problems for the economy. The presence of an inflation target should help overcome this.

- **Does a floating rate automatically remedy a deficit?** - UK experience indicates that a floating exchange rate probably does not automatically cure a balance of payments deficit. Much depends on the price elasticity of demand for imports and exports. The Marshall-Lerner condition says that a depreciation in the exchange rate will help improve the balance of payments if the sum of the price elasticities for imports and exports is greater than one.

- **Inflation** - The floating exchange rate can be inflationary. Apart from not punishing inflationary economies, which, in itself, encourages inflation, the float can cause inflation by allowing import prices to rise as the exchange rate falls. This is, undoubtedly, the case for countries such as UK where we are dependent on imports of food and raw materials.

Impact of changing exchange rates on exports and imports

In today's global economy, consumers are used to seeing products from every corner of the world in their local grocery stores and retail shops. These overseas products—or imports—provide more choices to consumers. And because they are usually manufactured more cheaply than any domestically-produced equivalent, imports help consumers manage their strained household budgets.

The relationship between a nation's imports and exports and its exchange rate is complicated because there is a constant feedback loop between international trade and the way a country's currency is valued. The exchange rate has an effect on the trade surplus or deficit, which in turn affects the exchange rate, and so on. In general, however, a weaker domestic currency stimulates exports and makes imports more expensive. Conversely, a strong domestic currency hampers exports and makes imports cheaper.

For example, consider an electronic component priced at $10 in the U.S. that will be exported to India. Assume the exchange rate is 50 rupees to the U.S. dollar. Neglecting shipping and other transaction costs such as importing duties for now, the $10 electronic component would cost the Indian importer 500 rupees.

If the dollar were to strengthen against the Indian rupee to a level of 55 rupees (to one U.S. dollar), and assuming that the U.S. exporter does not increase the price of the component, its price would increase to 550 rupees ($10 x 55) for the Indian importer. This may force the Indian importer to look for cheaper components from other locations. The 10% appreciation in the dollar versus the rupee has thus diminished the U.S. exporter's competitiveness in the Indian market.

At the same time, assuming again an exchange rate of 50 rupees to one U.S. dollar, consider a garment exporter in India whose primary market is in the U.S. A shirt that the exporter sells for $10 in the U.S. market would result in them receiving 500 rupees when the export proceeds are received (neglecting shipping and other costs).

If the rupee weakens to 55 rupees to one U.S. dollar, the exporter can now sell the shirt for $9.09 to receive the same amount of rupees (500). The 10% depreciation in the rupee versus the dollar has therefore improved the Indian exporter's competitiveness in the U.S. market.

The result of the 10% appreciation of the dollar versus the rupee has rendered U.S. exports of electronic components uncompetitive, but it has made imported Indian shirts cheaper for U.S. consumers. The flip side is that a 10% depreciation of the rupee has improved the competitiveness of Indian garment exports, but has made imports of electronic components more expensive for Indian buyers.

When this scenario is multiplied by millions of transactions, currency moves can have a drastic impact on a country's imports and exports.

The Euro Crisis/ crisis in Venezuela

The Venezuelan Crisis is an ongoing socioeconomic and political crisis that began in Venezuela on June 2, 2010 during the presidency of Hugo Chávez and has continued into the presidency of Nicolás Maduro. It is marked by hyperinflation, escalating starvation, disease, crime and mortality rates, resulting in massive emigration from the country. According to economists interviewed by The New York Times, the situation is the worst economic crisis in Venezuela's history and the worst facing a country that is not experiencing war since the mid-20th century, and is more severe than that of the United States during the Great Depression, of Brazil's 1985–1994 economic crisis, or of Zimbabwe's 2008–2009 hyperinflation crisis. Other American writers have also compared aspects of the crisis, such as unemployment and GDP contraction, to Bosnia and Herzegovina after the 1992-95 Bosnian War as well as Russia, Cuba and Albania following the collapse of the Eastern Bloc in late 1989.

On 2 June 2010, Chávez declared an "economic war" due to increasing shortages in Venezuela. The crisis intensified under the Maduro government, growing more severe as a result of low oil prices in early 2015, and a drop in Venezuela's oil production from lack of maintenance and investment. The government failed to cut spending in the face of falling oil revenues, and has dealt

with the crisis by denying its existence and violently repressing opposition. Extrajudicial killings by the Venezuelan government became common, with the U.N. reporting 5,287 killings by the Special Action Forces in 2017, with at least another 1,569 killings recorded in the first six months of 2019; the U.N. had "reasonable grounds to believe that many of these killings constitute extrajudicial executions", and characterized the security operations as "aimed at neutralizing, repressing and criminalizing political opponents and people critical of the government." The U.N. also stated that the Special Action Forces "would plant arms and drugs and fire their weapons against the walls or in the air to suggest a confrontation and to show the victim had resisted authority" and that some of the killings were "done as a reprisal for [the victims'] participation in anti-government demonstrations". Political corruption, chronic shortages of food and medicine, closure of companies, unemployment, deterioration of productivity, authoritarianism, human rights violations, gross economic mismanagement and high dependence on oil have also contributed to the worsening crisis.

Supporters of Chávez and Maduro say that the problems result from an "economic war" on Venezuela and "falling oil prices, international sanctions, and the country's business elite"; critics of the government say the cause is "years of economic mismanagement, and corruption". Most critics cite anti-democratic governance, corruption and mismanagement of the economy as causes of the crisis. Others attribute the crisis to the "socialist", "populist" or "hyper-populist ‘‘nature of the regime's policies and the use of these policies to maintain political power. In 2018, the United Nations High Commissioner for Human Rights (OHCHR) documented that "information gathered indicates that the socioeconomic crisis had been unfolding for several years" before international sanctions, with Michelle Bachelet saying in 2019 that the social and economic crisis was dramatically deteriorating, the government had not acknowledged or addressed the extent of the crisis, and she expressed concern that although the "pervasive and devastating economic and social crisis began before the imposition of the first economic sanctions", the sanctions could worsen the situation. National and international analysts and economists stated that the crisis is not the result of a conflict, natural disaster or sanctions but the consequences of populist policies and corrupt practices that began under the Chávez administration's Bolivarian Revolution and continued under the Maduro administration.

The crisis has affected the life of the average Venezuelan on all levels. By 2017, hunger had escalated to the point where almost seventy-five percent of the population had lost an average of over 8 kg (over 19 lbs) in weight, and more than half did not have enough income to meet their basic food needs. Reuters reported that a UN report estimated in March 2019 that 94% of Venezuelans live in poverty, and more than ten percent of Venezuelans (3.4 million) have left their country. The UN analysis estimates in 2019 that 25% of Venezuelans need some form of humanitarian assistance. Venezuela led the world in murder rates, with 81.4 per 100,000 people killed in 2018, making it the third most violent country in the world

Following increased international sanctions throughout 2019, the Maduro government abandoned policies established by Chávez such as price and currency controls, which resulted in the country seeing a temporary rebound from economic decline before COVID-19 entered Venezuela the following year. In an interview with José Vicente Rangel, President Maduro described dollarization as an "escape valve" that helps the recovery of the country, the spread of productive

forces in the country and the economy. However, Maduro said that the Venezuelan bolívar remains as the national currency.

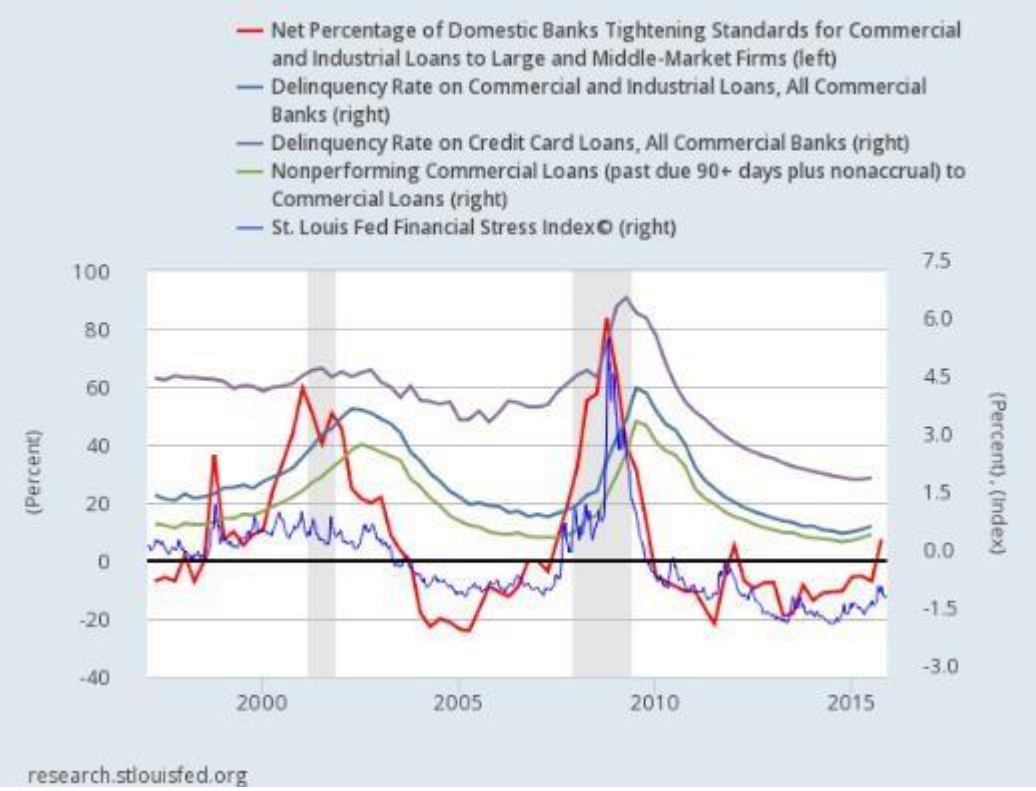
In Venezuela, the government of President Nicolás Maduro and the opposition are engaged in a bitter power struggle. Opposition lawmakers have been barred from standing for office, some have been arrested and others have gone into exile. The United Nations has accused the government of using a strategy of instilling fear in its population to retain power. The South American country has been caught in a downward spiral for years with growing political discontent further fuelled by skyrocketing hyperinflation, power cuts and shortages of food and medicine. Close to five million Venezuelans have left the country in recent years. But what exactly is behind the crisis rocking Venezuela.

Economic risk indicators for FDI and FII

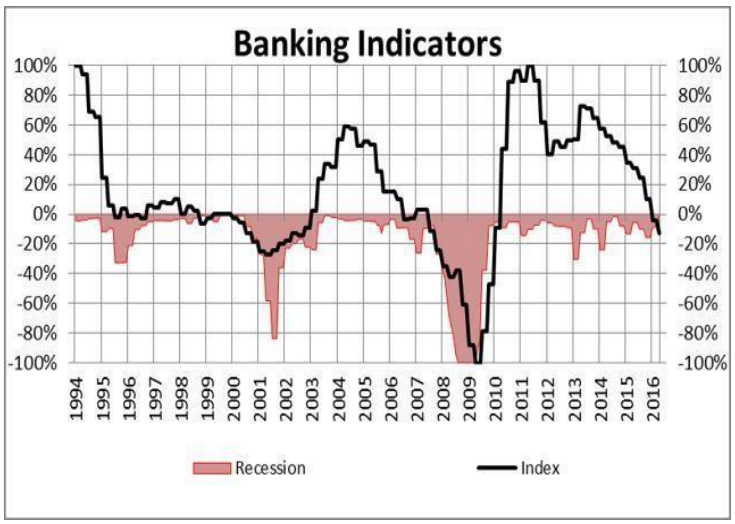
Following are the economic risk indicators:

1. **Financial risk**

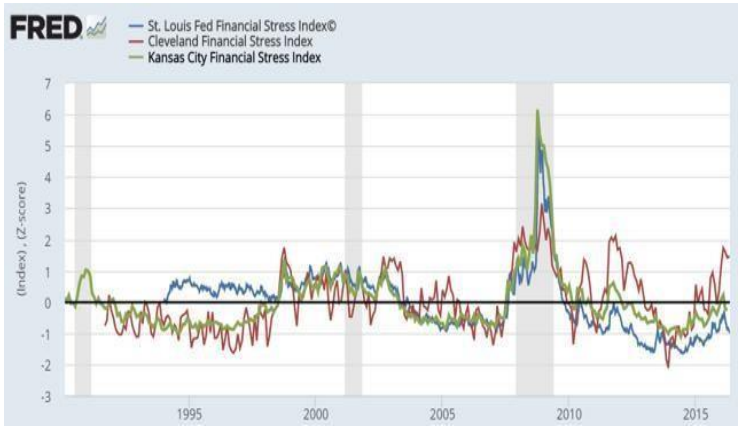
In 2015, banks began tightening lending standards, borrowers became more delinquent paying back loans and financial stress while still low, began to increase.



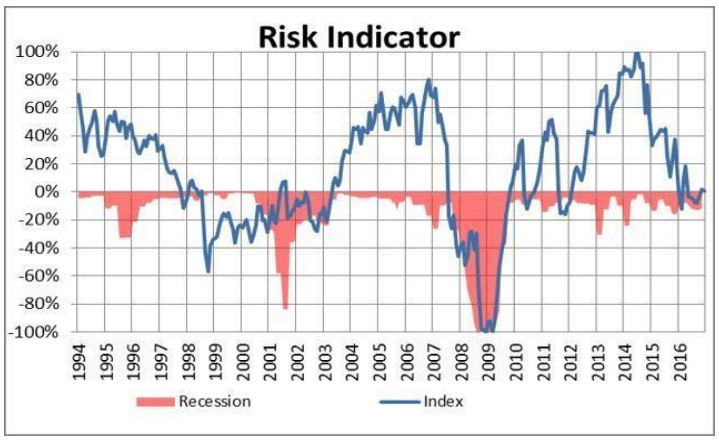
My Banking Indicator is a weighted average of some of these and other indicators.



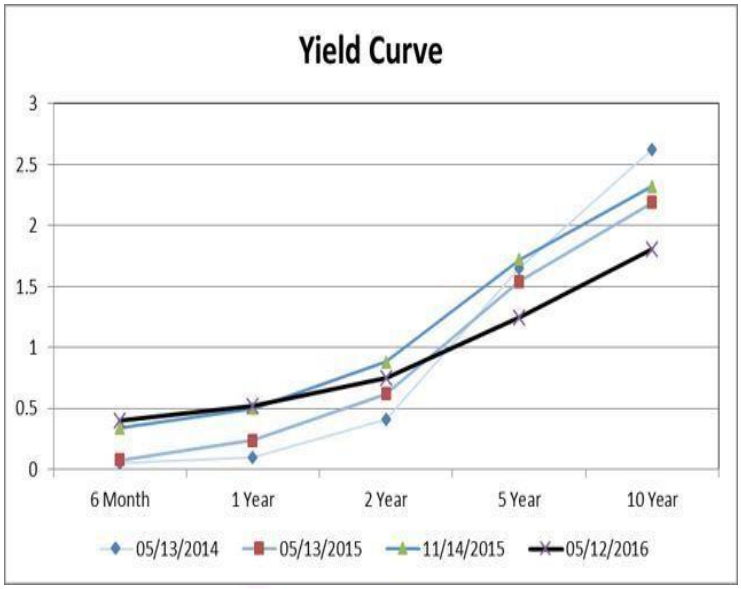
Financial stress indicators from the Federal Reserve are extremely valuable for compositing various financial risks. They measure foreign exchange rates, real estate, interest rates, yield spreads, volatility indexes, liquidity, yield curve, market indexes, and inflation.



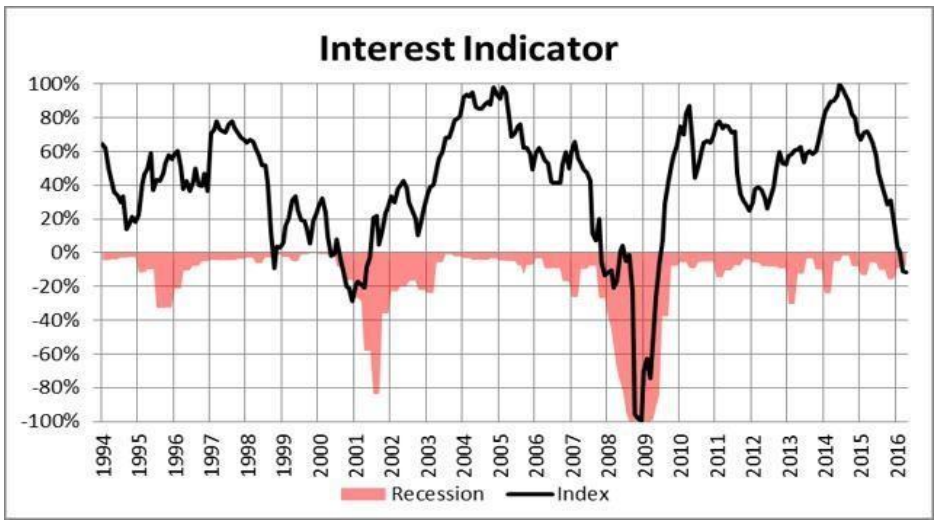
In addition to the Financial Stress indexes, I use the Chicago Fed Adjusted National Financial Conditions Index and Chicago Board Options Exchange Volatility Index (VIX) to come up with my own Risk Indicator. Near 100% are the best investment periods, negative indicators are the risky times to be long in the stock market. When the Risk Indicator is declining toward zero, are times to be looking for opportunities to rebalance to safety.



While the Yield Curve has not inverted, it has been flattening for the past two years as shown below. Short term interest rates are rising and long term rates are falling. It is normalizing of interest rates. This is typically a sign of lower expected growth rates from bond investors.

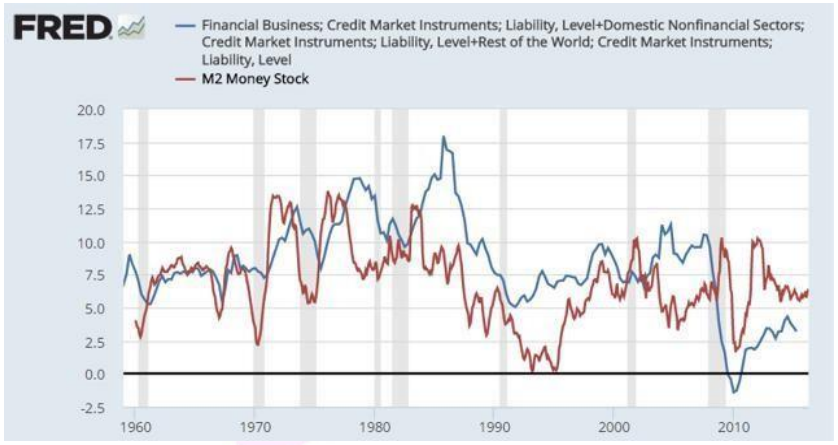


I also estimate an Interest Indicator as shown below based on bond total return, corporate bond spread, yield curve, TED spread and high yield rates.

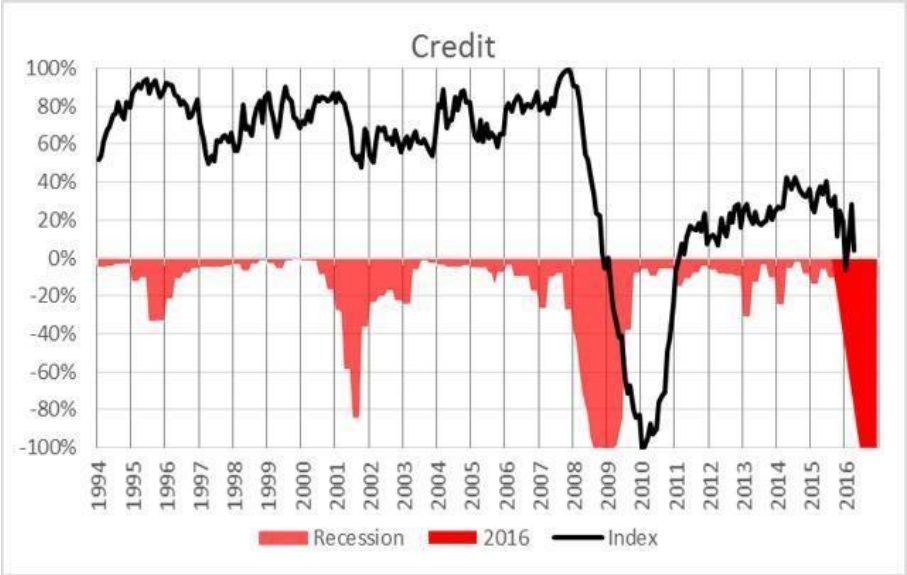


2. **Credit/monetary risk**

Access to money for investment is a large factor in growth of the economy. The next chart shows the high growth rate of credit over the past half century and the lower rate after the financial crisis. This will likely contribute to slower growth.

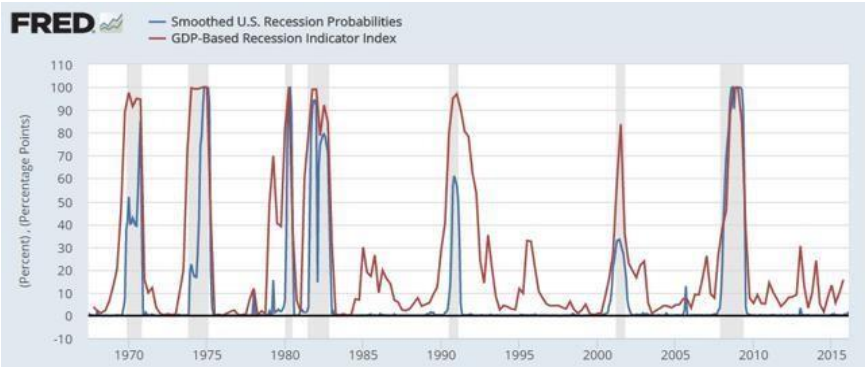


Financial (TCMDODFS), Domestic (TCMDODNS), and Rest of World (WCMITCMFODNS) credit market Instruments are used to estimate growth rates in total credit (currently $62T) in the US. In "Federal Reserve Indicators To Evaluate The Investment Environment", I show that credit to GDP has nearly tripled over the past half century which I believe to be a bubble. The following indicator also combines Revolving Consumer Credit (FLREVOLSLA) and total consumer credit (TOTALSL) to create my Credit Indicator.

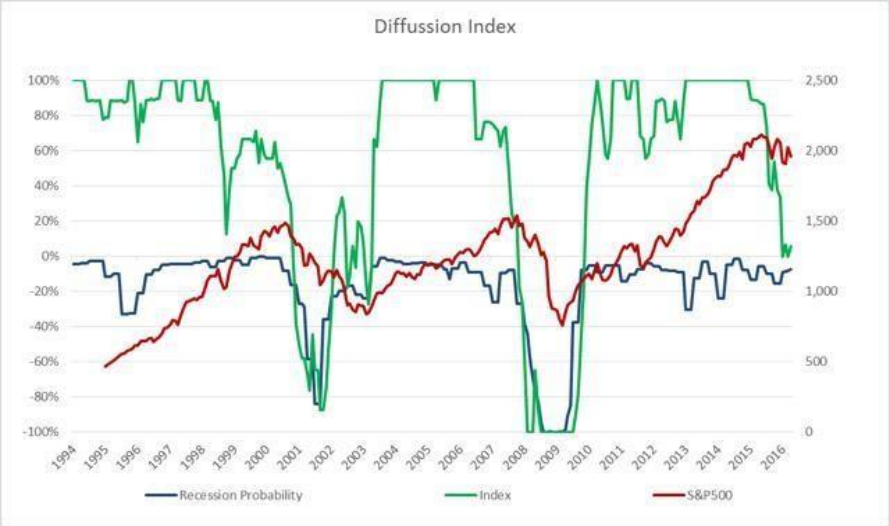


3. **RECESSION RISK**

In the media, there are so many estimates of recession probabilities. The Philadelphia Fed's survey of 42 economists puts the probability of recession at 12.5% in the second quarter of 2016 and 18.5% in the second quarter of 2017. "WSJ Survey: Recession Odds Remain Elevated Despite Calmer Financial Markets" describes a Wall Street Journal survey of 70 economists with an average estimated probability of 20% for a recession to start in the next 12 months. Below is the smoothed recession probability (RECPROUSM156N, Feb 2016) and the GDP-based recession indicator (JHGDPBRINDX, 2015 Q4).

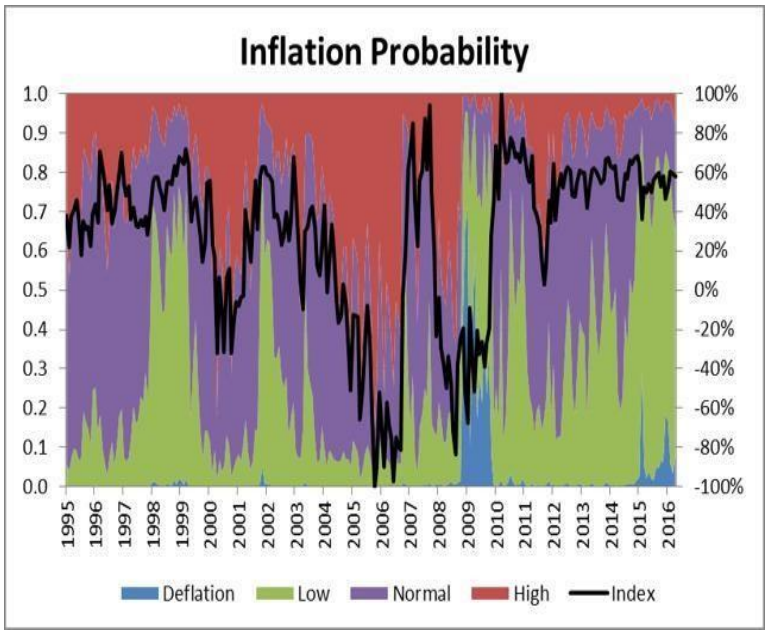


Below is my Diffusion Index of 18 indicators (leading, interest, coincident, labor, banking, housing, etc) highly correlated to the two recession indicators above. Recession indicators often attempt to match the "official" dates determined by the National Bureau of Economic Research. I want my Diffusion Index to give more warning that the economy is softening instead of picking a date when a recession starts. There are 8 out of 18 indicators (44%) that are now negative. The economy is "soft".



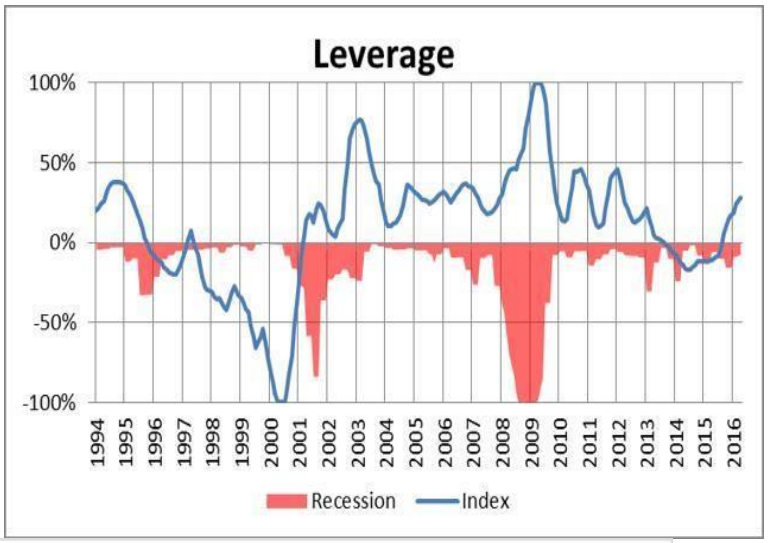
INFLATION RISK

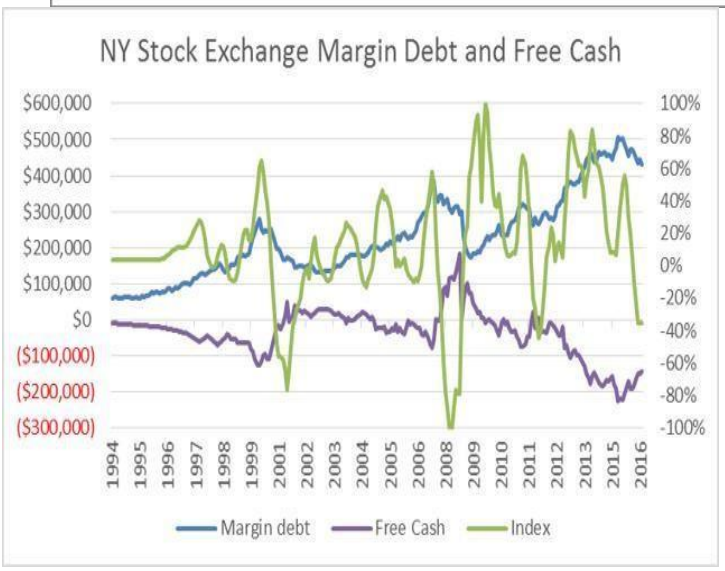
The St. Louis Fed Price Pressures are a good measure of the risk of inflation and deflation. We are currently in a low inflation environment. Notice that in the past 20 years there have only been two periods where there was much of a probability of deflation.



4. **LEVERAGE AND MARGIN RISK**

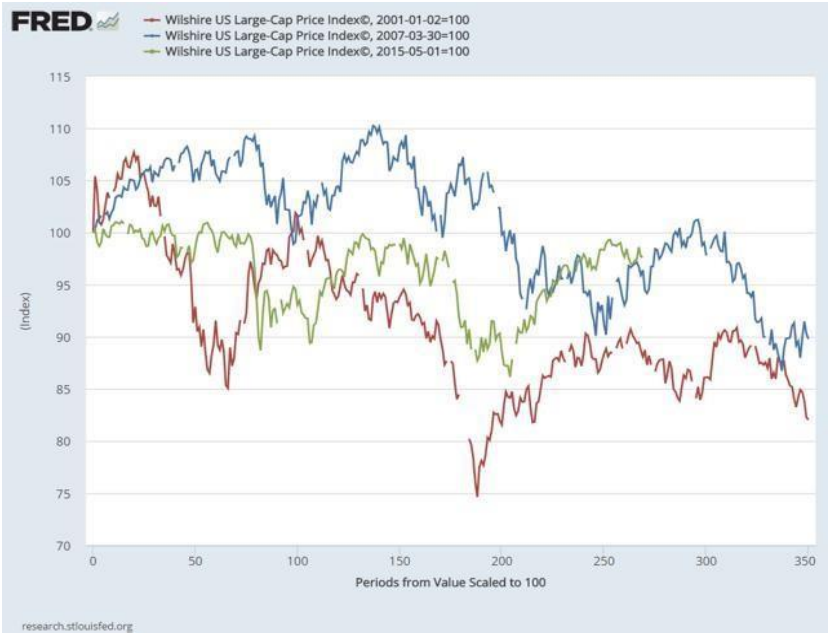
This Leverage Indicator measures equities of Non-financial corporate business (NCBEILQ027S) compared to Net Worth (TNWMVBSNNCB) to determine periods of probable excessive leverage in the stock markets. The next chart shows the margin debt and free cash in margin accounts from the New York Stock Exchange, as described by Doug Short and used by Lance Roberts. These indicators suggest a more risk off investing environment and deleveraging.



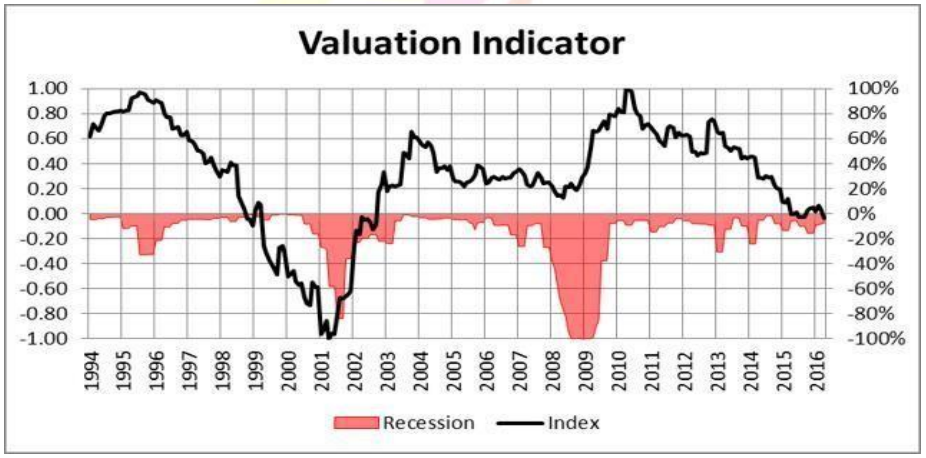


5. **VALUATION RISK**

Turning valuation metrics into an investment indicator was difficult because of the high valuation during the Technology Bubble and because of the duration that the markets can be highly valued before falling. The next chart shows how the Wilshire large cap index performed in the year following the peak valuation for the Technology Bubble, Financial Crisis and the current market. There is a risk that the stock market will fall more than 10% in 2016 if the economy fails to improve.

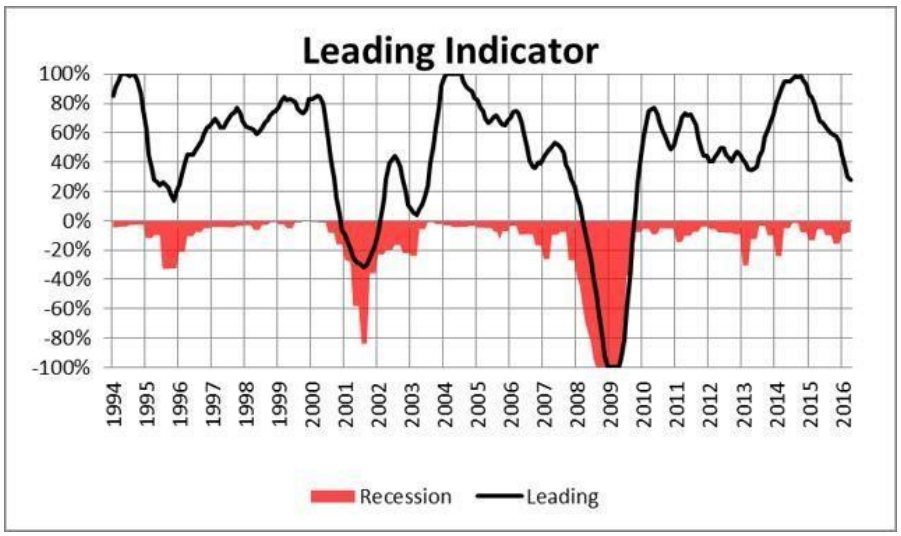


The three highest weighted sub-indexes in my Valuation Indicator are Tobin Q, Cyclically Adjusted Price to Earnings Ratio (NYSEARCA:CAPE) and trailing Price to Earnings Ratio. Also used is the Market Capitalization to Gross Domestic Product. Finally, I shift the allocation index forward 5 months to compensate for the long lead time.



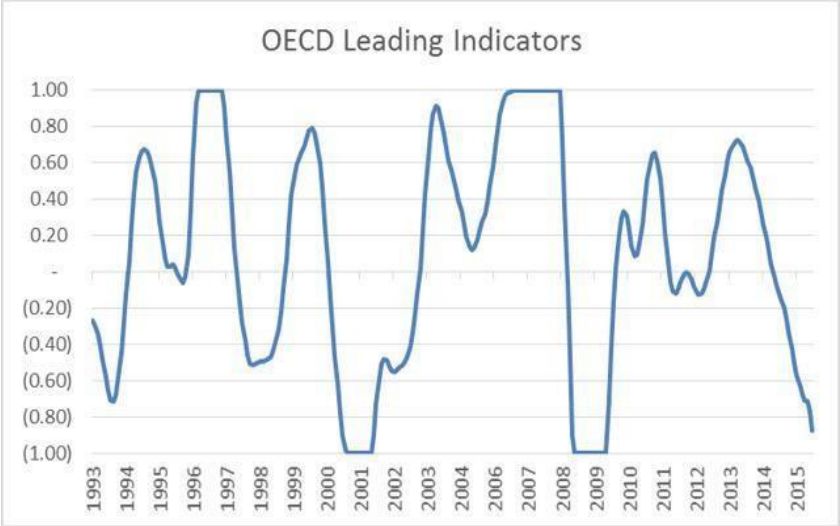
6. GROWTH RISK

An economy that is not growing has inherent risks. I combine the Philadelphia Fed (USSLIND), Conference Board, and Organisation for Economic Co-operation and Development (OECD) leading indicators into my US Leading Indicator. It shows a slowing economy.



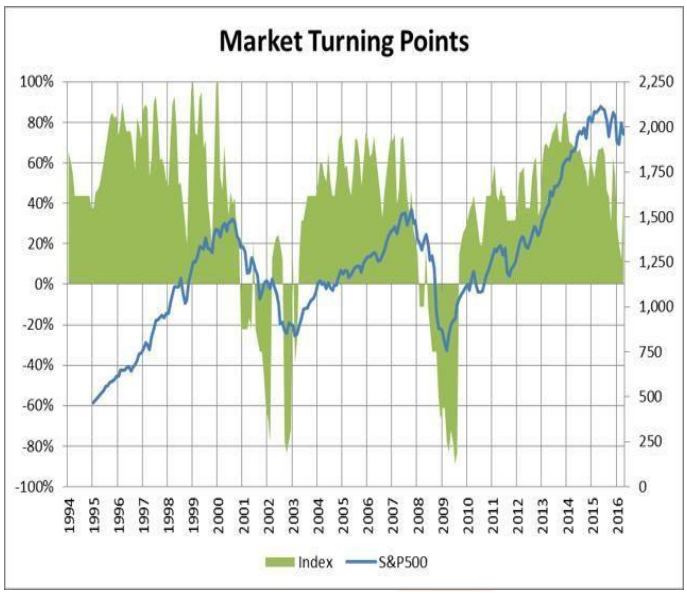
INTERNATIONAL RISK

The following indicator is based on a weighted average of Organisation for Economic Co-operation and Development (OECD) leading indicators for China, Japan, Euro Zone and United States. It reflects anticipated global slow growth. It is probably one of the higher risks to the current investment environment, particularly China.

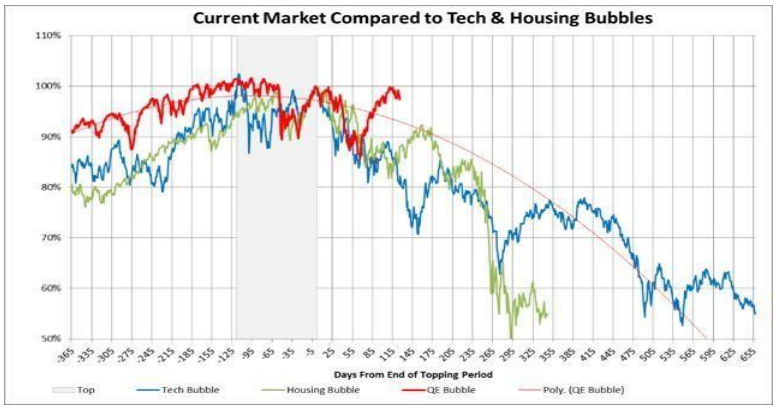


7. MOMENTUM RISK

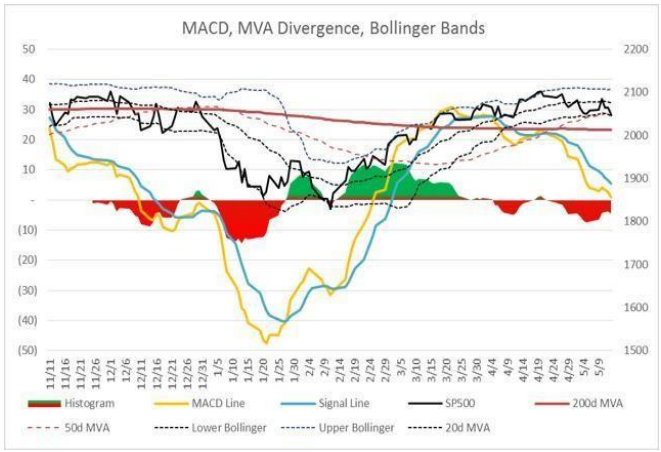
I created the Market Turning Points Indicator based on over 20 indicators to help identify tops and bottoms in the markets/economy. It is more of short term indicator based on percent of positive or negative indicators, technical indicators and rates of change.



From a longer term perspective, the current market (red) as measured by the Wilshire 5000 appears to be returning to the trajectory that follows the bursting of the Technology Bubble and the Financial Crisis as shown below.

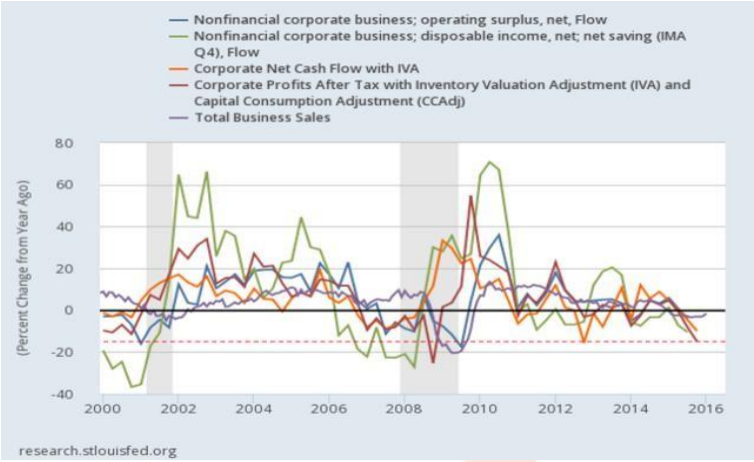


From a Technical (momentum) perspective, the market appears to be at risk (red) of continuing to decline.



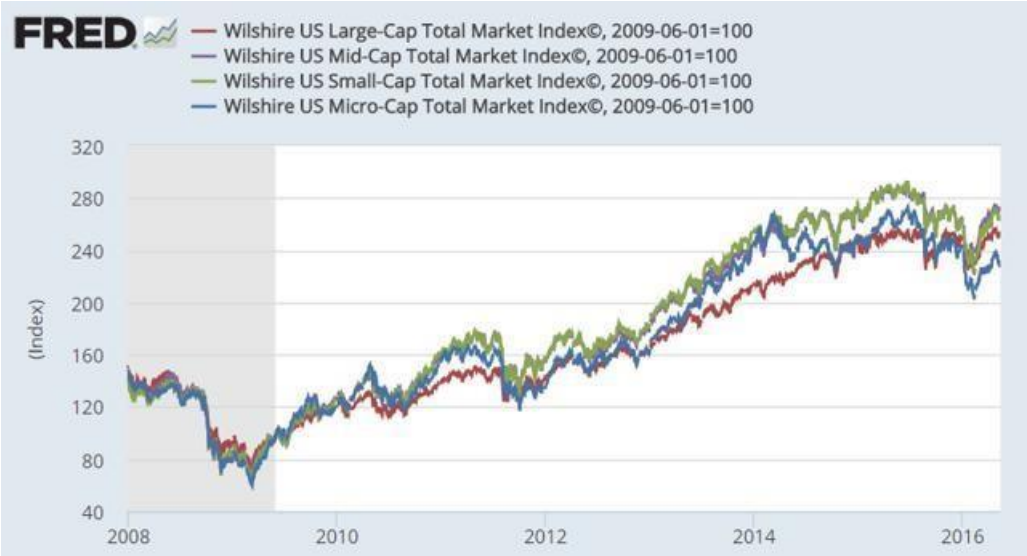
8. CORPORATE RISK

Most measures of corporate health are worsening such as profits, sales, income, cash flow and inventory to sales ratios. There is often a lag before stock prices reflect profits.

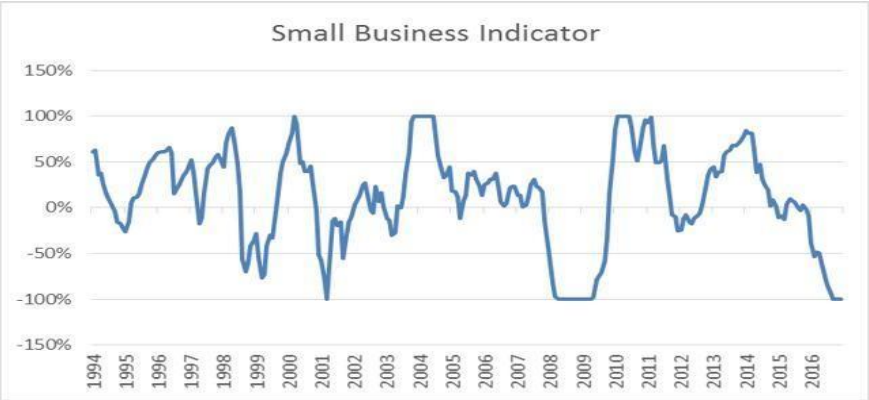


9. **SMALL BUSINESS RISK**

Stocks of small companies tend to fall before large cap companies at the end of business cycles as shown in the chart below.



My Business Indicator is based on the Wilshire Micro Cap Index and the percentage of banks tightening lending standards for small companies.



10. LOW GROWTH, LOW INFLATION

Below is a chart that I consolidated from " The Era Of Uncertainty" by Francois Trahan and Katherine Krantz (2011) suggesting where to invest based on inflation and growth. I put us in the boxes of low to neutral inflation and low growth. I am mostly invested in bonds, cash and gold. It is great book and worth reading.

Era Of Uncertainty			INFLATION ENVIRONMENT		
			Deflation	**Neutral Inflation**	**Inflation**
ECONOMIC GROWTH	Low	**Asset Allocation**	Government Bonds, Precious Metals, Cash	Government Bonds, Precious Metals	Precious Metals
		Sector Allocation	Staples, Health Care, Utilities	Staples, Health Care, Utilities	Care, Utilities, Energy, Industrials, Materials
		Factor Preference	Profitability, Income	Profitability	Profitability, Pricing Power
	Neutral	**Asset Allocation**	Stocks, Bonds	Stocks, Corporate Bonds	Stocks, Commodities
		Sector Allocation	Consumer Discretionary	Technology, Financials, Consumer Discretionary	Financials, Energy, Industrials, Materials
		Factor Preference	Income	Valuation, Beta	Pricing Power, Valuation
	High	**Asset Allocation**	Real Estate, Stocks, Corporate Bonds, Emerging Markets	Stocks, Corporate Bonds, Commodities, Emerging Markets, Real Estate	Stocks, Commodities, Real Estate
		Sector Allocation	Technology, Financials, Consumer Discretionary	All Cyclicals	Energy, Industrials, Materials
		Factor Preference	Beta, Income	Beta, Valuation	Beta, Pricing Power

FII

Institutional Investor credit ratings are based on a survey of leading international bankers who are asked to rate each country on a scale from zero to 100 (where 100 represents maximum creditworthiness). Institutional Investor averages these ratings, providing greater weights to respondents with greater worldwide exposure and more sophisticated country analysis systems.

Whenever a survey or expert panel is used to subjectively rate creditworthiness, it is hard to exactly define the parameters taken into account. At any given point in time an expert's recommendation will be based upon factors the expert feels are relevant.

In order to identify the factors that its survey participants have taken into consideration in the past, Institutional Investor asks them to rank the factors that they take into account in preparing country ratings. The bankers rank factors differently for different groups of countries and that rankings have changed over time within country groups. The ranking of factors affecting OECD country ratings appear to have been the most turbulent over the fifteen-year period.

Monetary approach and asset market approach to predict future exchange rate

Key Ingredients of the Monetary Approach

The monetary approach has two key ingredients: exogeneity of the real exchange rate, and a simple Classical model of price level determination.1 Exogeneity of the real exchange rate means that inflation at home or abroad will not affect how much foreign goods cost in terms of domestic goods. The Classical model of price determination says roughly that the price level is proportional to the money supply, so that monetary policy is the key determinant of inflation rates. Eventually, we will explore both of these constituents in some detail. Suffice it to say that as short-run descriptions of real economies, both appear quite unrealistic. However as long-run descriptions, they show somewhat more promise. So the monetary approach to flexible exchange rates is best seen as a description of long-run outcomes. As a description of short-run outcomes, it serves as a reference model that highlights some core concerns in our attempt to understand exchange rate determination.

Exogenous Real Exchange Rates Let P be the domestic consumer price index and P $*$ be the foreign consumer price index. For now, we will keep things simple by thinking of each price index as the monetary cost of a fixed consumption basket. Equation (3.1) defines the real exchange rate, Q.

$$Q \text{ def } = SP* P \quad (3.1)$$

We call Q the real exchange rate because it tells you the rate at which domestic goods must be given up to obtain foreign goods. The monetary approach to flexible exchange rates assumes that Q is exogenous. This exogeneity assumption fits naturally with the Classical model of price determination, which generally treats real variables as exogenous. Given the real exchange rate, the nominal exchange rate and the relative price level have a determinate relationship given by (3.2). S = Q P P$*$ (3.2) Here S is the exchange rate, P is the domestic price index, P $*$ is the foreign price index, and Q is the exogenous real exchange rate. For any given Q, equation (3.2) requires

that exchange rate movements offset price level movements so that the rate at which goods actually exchange for each other remains unchanged

Exchange Rate Regime and Management in India

Over the last six decades since independence the exchange rate system in India has transited from fixed exchange rate regime to floating rate regime.

1. Par Value System (1974-1971): After Independence Indian followed the 'Par Value System' whereby the rupee's external par value was fixed with gold and UK pound sterling.
2. Pegged Regime (1971-1991): India pegged its currency to the US dollar (1971-1991) and to pound (1971-75). Following the breakdown of Breton Woods system, the value of pound collapsed, and India witnessed misalignment of the rupee. To overcome the pressure of devaluation India pegged its currency to a basket of currencies. During this period, the exchange rate was officially determined by the RBI within a nominal band of +/- 5 percent of the weighted average of a basket of currencies of India's major trading partners.
3. The period since 1991 -1993: The transition to market-based exchange rate was in response to the BOP crisis of 1991. As a first step towards transition, India introduces partial convertibility of rupee in 1992-93 under LERMS.

Liberalized Exchange Rate Management System (LERMS): The LERMS involved partial convertibility of rupee. Under this system, India followed a dual exchange rate policy, where

41 converted at the official exchange rate and the remaining

60% converted at the market-based exchange rate

4. Market-Based Exchange rate Regime (1993- till present): The LERMS was a transitional mechanism to provide stability during the crisis period. Once the stability is achieved, India transited from LERMS to a full flash market exchange rate system. As a result, since 1993, exchange rate fluctuations are marker determined. In the 1994 budget, 60:40 ratio was removed, and 100 percent conversion at market-based rate was allowed for all goods and capital movement

Open-Economy Macroeconomics:

Basic Concepts

Open and Closed Economies

•A closed economy is one that does not interact with other economies in the world.

•There are no exports, no imports, and no capital flows.

•An open economy is one that interacts freely with other economies around the world.

•An open economy interacts with other countries in two ways.

•It buys and sells goods and services in world product markets.

•It buys and sells capital assets in world financial markets.

The international flow of goods and capital

•An Open Economy

•The United States is a very large and open economy—it imports and exports huge quantities of goods and services.

•Over the past four decades, international trade and finance have become increasingly important.

The Flow of Goods: Exports, Imports, Net Exports

•Exports are goods and services that are produced domestically and sold abroad.

•Imports are goods and services that are produced abroad and sold domestically.

•Net exports (NX) are the value of a nation's exports minus the value of its imports.

•Net exports are also called the trade balance.

•A trade deficit is a situation in which net exports (NX) are negative.

•Imports > Exports

•A trade surplus is a situation in which net exports (NX) are positive.

•Exports > Imports•

Balanced trade refers to when net exports are zero—exports and imports are exactly equal.
•Factors That Affect Net Exports

•The tastes of consumers for domestic and foreign goods.

•The prices of goods at home and abroad.

•The exchange rates at which people can use domestic currency to buy foreign currencies. The incomes of consumers at home and abroad.

•The costs of transporting goods from country to country.

•The policies of the government toward international trade.

The Flow of Financial Resources:

Net Capital Outflow

•Net capital outflow refers to the purchase of foreign assets by domestic residents minus the purchase of domestic assets by foreigners.

•A U.S. resident buys stock in the Toyota corporation and a Mexican buys stock in the Ford Motor corporation.

•When a U.S. resident buys stock in Telmex, the Mexican phone company, the purchase raises U.S. net capital outflow.

•When a Japanese resident buys a bond issued by the U.S. government, the purchase reduces the U.S. net capital outflow.

•Variables that Influence Net Capital Outflow

•The real interest rates being paid on foreign assets

•The real interest rates being paid on domestic assets.

•The perceived economic and political risks of holding assets abroad.

•The government policies that affect foreign ownership of domestic assets.

The Equality of Net Exports and Net Capital Outflow

•Net exports (NX) and net capital outflow (NCO) are closely linked.

•For an economy as a whole, NX and NCO must balance each other so that: NCO = NX •This holds true because every transaction that affects one side must also affect the other side by the same amount. Saving, Investment, and Their Relationship to the International Flows •Net exports is a component of GDP: Y = C + I + G + NX

•National saving is the income of the nation that is left after paying for current consumption and government purchases:

Y - C - G = I + NX

•National saving (S) equals Y - C - G so:

S = I + NX or Saving (S) = Domestic Investment (I) + Net Capital Outflow (NCO)

The prices for international transactions: real and nominal exchange rates

•International transactions are influenced by international prices.

•The two most important international prices are the nominal exchange rate and the real exchange rate. Nominal Exchange Rates

•The nominal exchange rate is the rate at which a person can trade the currency of one country for the currency of another.

•The nominal exchange rate is expressed in two ways: •In units of foreign currency per one U.S. dollar.

•And in units of U.S. dollars per one unit of the foreign currency.
•Assume the exchange rate between the Japanese yen and U.S. dollar is 80 yen to one dollar. •One U.S. dollar trades for 80 yen.
•One yen trades for 1/80 (= 0.0125) of a dollar
. •Appreciation refers to an increase in the value of a currency as measured by the amount of foreign currency it can buy.
•Depreciation refers to a decrease in the value of a currency as measured by the amount of foreign currency it can buy.
•If a dollar buys more foreign currency, there is an appreciation of the dollar.

•If it buys less there is a depreciation of the dollar.

Unit-5

. International Banking: Reserves, Debt and Risk : Nature of International Reserves – Demand for International Reserves – Supply of International Reserves – Gold Exchange Standard – Special Drawing Rights – International Lending Risk – The Problem of International Debt – Financial Crisis and the International Monetary Fund – Eurocurrency Market

International Banking: Reserves, Debt & Risk

Demand for International Reserves
dependent on:

monetary value of international transactions disequilibrium that can arise in balance of payment positions speed and strength of balance of payments adjustment mechanisms institutional framework of the world economy In theory there would be no need for international reserves with freely floating exchange rates.

With Fixed Exchange Rates
assume an increase in imports increases the demand for pounds from D0 to D1if the U.S. has a fixed rate at $2 Fed must supply 100 pounds effect would be an increase in supply to restore exchange rate

With Managed Float assume again an increase in imports increases the demand for pounds from D0 to D1if the upper limit for float is $2.25 Fed must supply 40 pounds effect would be an increase in supply restoring rate of $2.25

Other Determinants of Demand
automatic adjustment mechanisms: nation's propensity to enact policies such as tariffs, quotas, and subsidies reduce its need for international reserves economic policies: a greater level of international coordination through such organizations as IMF and EU reduces the need for international reserves world prices & income: rising prices, income and wealth inflate value of transactions increasing the need for international reserves

Supply of International Reserves
Total Supply Owned Reserves foreign currencies gold special drawing rights Borrowed Reserves foreign nations foreign financial institutions international agencies

Foreign Currencies largest share of reserves consists of holdings of national currencies through 1900s two currencies commonly held to finance international transactions were UK pound and U.S. dollar liquidity problem – result of payment deficits position for U.S. while on gold exchange standard

International Gold Standard
gold served directly as international means of payment governments agreed to convert currency into gold at fixed rate discipline of gold – prevented monetary authorities from producing excessive amount of paper money1815 to 1913 gold decreased from 33% to 10% of aggregate money supply Great Depression caused nations to abandon gold standard

Gold Exchange Standard
IMF established system of fixed exchange rates with gold as primary reserve asset gold as international unit of account member nations agreed to state values of currencies in terms of gold or the gold content of U.S. dollar dollar-gold system – coexistence of dollar and gold as international reserve assets viable system as long as gold stocks of U.S. were large relative to dollar liabilities abroad

Demonetization of Gold
1960s supply of foreign held dollars exceeded U.S. stock of gold1968 two-tier gold system official tier at which central banks could buy and sell gold private market in which gold could be traded at free market price1971 Nixon suspended commitment to buy and sell gold at $351975 official price of gold abolished as unit of account for international monetary system

Special Drawing Rights
established as international reserve asset in 1969value defined as a basket of currencies [dollar, yen, pound euro] serve as unit of account for Midsomer nations peg their currencies to the SDR

Special Drawing Rights
SDR weights:

weights of the US dollar, euro, Chinese renminbi, Japanese yen, and British pound sterling are percent, percent, percent, 8.33 percent, and 8.09 percent The basket composition is reviewed every five years next review is currently scheduled to take place by September 30, 2021In the most (concluded in November 2015), the Executive Board decided that, effective October 1, 2016, the Chinese renminbi is determined to be freely usable and was included in the SDR basket.

Borrowed Reserves IMF Drawings – transactions by which the IMF makes foreign currency loans to member nations with balance of payment deficits General Agreements to Borrow – ten leading industrial nations agreement to temporarily supplement IMF reserves; once loans are repaid reserves revert back to original levels Swap Agreements – bilateral agreements between central banks for temporary exchange of currencies

International Lending Risk
credit risk - probability that interest or principal will not be repaid larger risk results in higher interest rate assessing credit risk on international loans more difficult country risk - probability that political developments will impact international investment currency risk – economic risk associated with currency appreciation or depreciation; increased if hedging not possible or exchange controls exist

Problems of International Debt
concern that volume of lending insufficient particularly with respect to developing nations excessive international lending created repayment problems during global recession in early 1980sdebt service/export ratio – interest and principal payments as a percentage of export earnings indicating: interest rate nation pays on its debt growth in exports of goods & services

Debt Servicing Difficulties
reasons for difficulties:

improper macroeconomic policies leading to balance of payments deficit excessive borrowing or unfavourable terms uncontrollable economic events options: cease repayment service debt at all costs debt rescheduling emergency loans from IMF with conditionality

Reducing Exposure to Developing Nation Debt
loan sales – sell to other banks in secondary market for less than face value debt buyback – government of debtor nation buys loan from bank at discount debt for debt swaps – bank exchanges loans for securities issued by debtor nation's government at discount debt/equity swaps – bank sells loans at discount to debtor nation's government for local currency used to finance equity investment

Debt Reduction & Forgiveness
debt reduction – voluntary agreement reducing portion of debtor nation's debt service negotiating modification in terms and conditions of contract debt/equity swaps or debt buybacks debt forgiveness – creditor's elimination of contractual obligations of debtor nation write-offs of debt abrogation of interest obligations advocates argue elimination of debt service will lead to growth in developing nations

Eurodollar Market Eurodollars – bank deposited liabilities denominated in U.S. dollars in banks outside U.S. though not necessarily in Europe free from regulation by host country competitive advantage relative to domestic deposits substantial growth since 1950 because of greater freedom from regulation eliminate the risk associated with converting from one currency to another

IMF and Eurocurrency Market

Eurocurrencies are a form of bank money: an unsecured short-term bank debt denominated in a currency (for instance, US dollars) but issued by banks operating offshore – that is, in a geographical location or a legal space situated outside of the jurisdiction of the national authorities presiding over that currency (for instance, the Federal Reserve) – in order to fund short-term loans. Eurodollars were the first and more prominent example of Eurocurrency. The term was coined in the late 1950s, when banks in London and other European financial centers started bidding for dollar liquid balances in the hands of foreign wealth owners (other commercial banks, central banks, official institutions, commercial companies) and used them to fund short-term loans to other foreign banks and nonfinancial companies. At the same time, smaller offshore markets for time deposits denominated in other international currencies emerged; the most relevant examples were the Euro Deutschemark, Euro Swiss Franc and Euro yen markets in London, and the Euro sterling market in Paris. In the 1970s, as banks operating in extra-European financial centres expanded their Eurocurrency (mostly Eurodollar) activities, the market acquired a global dimension, turning into "one of the fastest-growing as well as the most vital and important capitalist institutions" of the twentieth century (Stigum and Crescenzi 2007, p. 209). By the mid-1980s, London accounted for 25% of global Eurocurrency assets, followed by Tokyo (10%), Paris (7%), and offshore financial centres in the Caribbean (Bahamas, Cayman Islands) and the Far East (Singapore and Hong Kong), with a share between 4% and 6% each (Lewis and Davis 1987, pp. 230–231). Since then, the prefix "Euro" survived more as a remnant of the origins of the market, than as a characterization of its geographical scope. Given the historical importance of Eurodollars, their impact on global monetary and credit conditions, and the extensive literature on their origins, development, and implications, this chapter will often make special reference to them.

As a financial product, a Eurocurrency is simply a time deposits (or a certificate of deposit, that is, a negotiable receipt of a deposit) yielding a fixed rate and with maturities ranging from overnight to 6 months. Time deposits are a form of near (or quasi) money: short-term stores of value that cannot be used directly as a medium of exchange to settle debts but can be very easily converted into cash. In spite of their simplicity, Eurocurrencies represented a financial innovation with enormous consequences. Their "essential feature" (Niehans 1984) was the separation between the location of the issuing bank and the currency in which transactions were denominated. This resulted in the unbundling of currency risk from political risk and more generally in the ability to circumvent regulations imposed by national authorities. For instance, the most important advantage of booking dollar deposits offshore was to avoid interest rate ceilings, reserve requirements, and deposit insurance fees imposed by US authorities on deposits held with domestic banks. By significantly reducing the costs of bank intermediation, this allowed depositors to yield higher interest rates and borrowers to have access to cheaper short-term loans.

Eurodollars and the other Eurocurrencies were an innovative form of wholesale banking (i.e., transactions with large customers – including other banks – involving large sums), which led to the development of an international money market with a specific microstructure and autonomous sets of interest rates. Since the 1960s, therefore, Eurocurrency markets played a critical role as a channel for the redistribution of international liquidity. Banks' borrowing and lending in the Eurocurrency wholesale market was also conducive to a major structural change in banking business: the marketization of liabilities, pioneered by US commercial banks both domestically and internationally in the 1960s, and subsequently adopted by banks in both industrialized and developing economies. Liability management – the active management of short-term debt instruments with different rates, maturities, and currency of denomination to match the size and characteristics of asset portfolios – created unprecedented scope for leverage, thus enhancing the fast expansion of banks' balance sheets. However, it also made banks much more vulnerable to currency, liquidity, interest rate, and counterparty risk and facilitated the international transmission of financial shocks

By drawing on an extensive economic and historical literature, this chapter analyses different aspects of the historical development of Eurocurrencies and their role in the international monetary and financial system between the late 1950s and the Great Financial Crisis of 2007–2009. The first section "Theory" discusses alternative interpretations based on different approaches to monetary economics. The second section "Scale" presents estimates of the size of Eurodollar and Eurocurrency markets in the long run. The third section "Structure" describes the microstructure of the market and its interbank segment. The fourth section "Growth" discusses the different phases of expansion of the market and their determinants. The fifth section "Arbitrage" analyses the relationships between rates in the Eurodollar market and other US money markets. The sixth section "Risk" explores how risk in the Eurocurrency markets evolved over time and analyses historical episodes of severe stress in the interbank market. The seventh section "Political Economy" focuses on the attitude of British authorities in the emergence of Eurodollars and the international debates of the 1970s on the multilateral regulation of Eurocurrencies. A brief summary and final considerations are offered in the last section.