Welcome to The Power of Macroeconomics. Lecture Ten, Exchange Rates, the Balance of Payments, and Trade Deficits. The purpose of this lesson is to explain how exchange rates and our international monetary system work. And illustrate how fiscal and monetary policies may or may not be used in a global economy. We will also examine the roots and scope of America's chronic trade deficit problem.

Mirror, mirror on the wall, who's the biggest debtor nation of them all? The surprising answer is not Brazil or Mexico or some other developing country, rather it is the richest nation in the world, the United States of America.

In this regard the US has come full circle. For when America was in its infancy it was likewise a debtor nation. In fact, from the beginning of the revolutionary way until well after the Civil War, America borrowed heavily from the nations of Europe to build its capital stock and infrastructure. It wasn't until the US helped Europe fight two world wars that the debtor shoe was put on the other foot.

During those years the US greatly expanded its exports to Europe and after each war it lent large sums of money to the combatants for post-war relief. In the course of doing so the US became the world's largest creditor nation.

Beginning in the early 1980's, America began running huge trade deficits. And over the years, these trade deficits have led to an accumulated net foreign debt, in the trillions and trillions of dollars. To many observers, America's chronic trade deficits are every bit as dangerous as its chronic budget deficits. These trade deficit hawks warn that America is being forced to sell off its land and its factories and its future, to finance these deficits.

Others however see the trade deficits simply as an opportunity to buy inexpensive foreign goods, and enjoy a higher standard of living than Americans could otherwise achieve. These trade deficit doves argue that if foreign countries are foolish enough to sell us cheap goods, we should be wise enough to buy and enjoy them and not try to erect protectionist trade barriers.

In this lesson we're going to examine the roots and scope of the trade deficit problem from the financial side of the ledger. To do so we must first learn some basic balance of payments accounting. Then we'll describe how exchange rates work and how the international monetary system is structured. Once we get these fundamentals down we can then talk about the important impacts the domestic fiscal and monetary policies can have on foreign capital markets and the trade deficit. From this discussion we'll also come to better understand the important link between the budget and trade deficits and why it is increasingly important for the nations of the world to coordinate their fiscal and monetary policies in a global economy.

To begin our study of international trade, let's learn some basic balance of payments accounting. We can start by distinguishing between the so called current account and the capital account. And then illustrate the critical relationship between the two. This relationship is summarized in the so called Trade Identity Equation. It says that if a country runs a trade deficit in its current account. It must balance that deficit with inflows into its capital

account. It is illustrated in this table, which presents the US balance of payments schedule for a typical year. From the table, we can see that the current account consists of three major items; the Merchandise Trade Balance, Fees for Services and Net Investment Income. The merchandise trade balance is by far the biggest item. It reflects trade in commodities such as food and fuels, and manufactured goods. In the table, the US shows accounting debits or imports of $803 billion. And, credits or exports of $612 billion. Subtracting one from the other, we have a net merchandise trade deficit of minus $191 billion. When you read in the newspaper that the US is running a trade deficit, it is this merchandise trade balance to which journalists often are referring.

But this is only part of the total picture. The second item in the current account is fees for services. Such services include shipping, financial services and foreign travel. While this fees category is much smaller than the merchandise trade balance. It has been growing in recent years, as the US has shifted from a manufacturing economy to a more service-oriented economy. This growth has helped offset at least some of the large merchandise trade deficits, as is evident from the table. In particular, the service fees received by the US are $237 billion, and fees paid out are $157 billion. Yielding a net surplus of $80 billion. This in turn yields a net balance for goods and services of negative $111 billion.

Still a third item in the current account is investment income. The table shows a credit of $206 billion. This represents the amount of income earned by Americans holding foreign assets. While the debit of $203 billion represents the amount of income earned by foreigners holding US assets. Historically, this category is on a small surplus for the US. However, as foreigners have continued to accumulate more and more US assets, this category is starting to run in the red, further exacerbating the trade deficit.

Finally the fourth item in the current account is unilateral transfers. Which represent payments not in return for goods and services. Now some of these four items in the table, we wind up with the balance on the current account. This shows a deficit of a $148 billion. As indicated above by the basic trade identity, this deficit must be offset by a net surplus in the capital account.

One part of the capital account shows official-reserve changes. When all countries have purely market-determined exchange rates, the category equals zero. However, when countries intervene in foreign exchange markets. As we shall explain more about soon, they attempt to affect the exchange rate by buying and selling foreign currencies.

This shows up in the balance of payments as changes in official reserves. However, as you can see from the table, this is a small category. Only $7 billion.

Of far greater consequence are the capital outflows and inflows, which track the purchases of both real assets like hotels. And factories and financial assets such as stocks and bonds. For example, foreign purchases of US assets represent capital inflows, and might include the purchase of government bonds by a German pension fund. The buying of American stock by a

Dutch mutual fund, or the acquisition of a factory in Pennsylvania by Japanese investors.

In our table we show a credit of 517 billion. Similarly when US investors purchase assets abroad like hotel chains or foreign stocks. This results in capital outflows and a debit; such as, the $376 billion represented in the table.

And summing US and foreign purchases of assets, we get a balance of $141 billion. Of course, when we add a official reserves to this sum, we come up with a plus $148 billion. This is just enough to offset the current account deficit. And make the sum of the current capital accounts equal to zero, just as our basic trade identity equation requires.

Let's turn now to the important topic of Exchange Rates. An exchange rate may be defined as the rate at which one nation's currency can be traded for another nation's currency. The first thing to understand about exchange rates is that they are quoted in pairs. With one country's currency exchanging for another country's at a particular rate. Here, we see that at this particular point and time, the U.S. dollar exchanges for 12.68 Mexican Pesos. While one Swiss Franc will trade for 0.70 British Pounds. This figure illustrates how exchange rates are determined by the forces of supply and demand in the global marketplace. We are looking at the market for Dollars versus Pounds. Note, that the equilibrium exchange rate will occur at the intersection of the demand for Pounds D1 and the supply of pounds S1. What do you think that equilibrium exchange rate is? That's right. If you want to buy 1 British pound, it will cost you a full $2. The second thing to understand about exchange rates, is that they can rise and fall over time.

Note, that if a country's currency gains in value relative to another, it is said to appreciate. In contrast, if a country's currency loses value relative to another, it is said to depreciate. So, here's a question. Suppose the U.S. dollar exchanges today, for 1.2 Euros, but, by next year, exchanges for 1.5 euros. As it appreciated or depreciated. In this case, $1 can by more euros so it has risen in value and therefore appreciated. In contrast, if the exchange rate falls to one euro for $1, the dollar can buy fewer euros, and therefore has depreciated. So, what do you think are some of the reasons currencies appreciate or depreciate?

Basically, there're five main reasons why exchange rates change over time, gaining or losing value. These include, differing rates of GDP growth between countries, differing rates of inflation, a change in real relative interest rates, a change in taste and simple speculation.

The first reason why exchange rates may move is, a change in the relative GDP growth of two nations. In a nutshell, faster GDP growth in one country like Great Britain relative to another country like the United States, will typically lead to faster income growth in that nation. This faster income growth in turn means, British consumers will increase their purchases of U.S. imports. In this case, which currency do you think will appreciate relative to the other, the English pound or the US dollar? We can use this figure to answer this question under the assumption that a recession hits the United States. In a recession, US income will

fall relative to British income. As a result the U.S. will buy fewer British imports and therefore need fewer British pounds to do so. This will decrease the demand for pounds and shift the demand curve inward. The result? The dollar appreciates relative to the British pound.

Now, what about differing rates of inflation? Suppose, for example, that the rate of inflation in Canada is higher than in Europe. Will the Canadian dollar appreciate or depreciate relative to the euro? In this case, the Canadian dollar will depreciate relative to the euro. Why? Because exchange rates in the currency markets, must reflect real inflation adjusted price differences in the goods markets.

Here's another way of looking at this important inflation factor driving exchange rates. Suppose inflation raises the actual or nominal price of, say, an auto made in Canada relative to the nominal price of an identical auto made in Europe. In this case, there must be a corresponding adjustment in the exchange rate so that the real, inflation adjusted prices of the two autos stays the same.

Economists refer to this key concept as, The Law of One Price. Now here's an interesting historical note. As we will discuss later in the lecture, differing rates of inflation played a key role in the downfall of the so called gold standard, which was a key linchpin of the international monetary system. For over 60 years.

A third reason why exchange rates move has to do with changes in relative interest rates across countries. Suppose, for example, the US Federal Reserve raises interest rates, while the Bank of England takes no such action.

In this case, U.S. interest rates have risen relative to those in England. Which currency will appreciate relative to the other? The dollar or the pound? And why? In this case, British investors will respond to a rise in American interest rates by shifting more of their investment funds from Britain to America.

For example, they may wish to buy US government bonds at the higher interest rates. But, in order to do this, they must first sell some of their domestic investments and then exchange pounds for dollars in global currency markets.

This figure illustrates the adjustment process, as British investors trade their pounds for dollars in global currency markets. This increase in the supply of pounds leads to a rightward shift of the supply curve. This in turn causes the dollar to appreciate. In the example, it now takes only $1 to buy a British pound rather than $2.

Still a fourth reason for exchange rate movements is a change in tastes. For example, suppose that Japanese autos decline in popularity in the United States, perhaps because of some increased concerns over safety. What do you think will happen to the value of the Japanese yen? Clearly, the Japanese yen will depreciate relative to the U.S. dollar, as U.S. consumers reduce their purchases of Japanese autos and therefore, their demand for yen. The fifth, and final, reason for exchange rate movements has to do with currency speculation. For example, suppose currency traders believe that the Brazilian Central Bank is going to raise interest rates to fight inflation. Will currency traders be more likely to buy or sell Brazil's currency, the rial, before the Central Bank makes it's forecast and move.

As we've learned, should Brazil's central bank raise interest rates, this rise in relative interest rates will likely attract more foreign investment into Brazil. This, in turn, should boost the demand for the Brazilian real. Therefore, a currency speculator is likely to buy the Brazilian real before the move. In effect, betting the real will appreciate.

In the examples we have used thus far, the value of the various currencies that we discussed were allowed to freely move in response to market conditions. This type of monetary system is called a floating exchange rate system. However, not all countries of the world allow their currencies to float. Instead, some use what is called a fixed exchange rate system. In a fixed exchange rate system, a country will peg the value of its currency tightly to the value of another. Most often, the US dollar, or a basket of currencies. The country will then make the necessary adjustments to maintain the value of that peg.

To better understand these two starkly different systems, floating versus fixed exchange rates, let's take a trip through time.

Between 1867 and 1933, except for the period around World War I Most of the nations in the world were on the gold standard. Under this fixed exchange rate system, the currency issued by each country had to either be gold or redeemable in gold. And once a country agreed to be on the gold standard, its currency was convertible into a fixed amount of gold. With these fixed exchange rates, if the nation ran a trade deficit, it would be required to use its gold reserves to buy currency to prevent the value of the currency from falling. In contrast, if a nation ran a trade surplus, it would accumulate gold.

Now you might wonder why the gold standard was so popular? The answer lies in something called perhaps rather strangely the gold specie flow mechanism. This monetary adjustment mechanism was first described by Scottish philosopher and economist, David Hume in 1752. And it is illustrated in this figure. Suppose, then, that both Britain and the US start with an equal amount of gold reserves, and begin trade. The US initially runs a trade deficit, so that it has to ship some of its gold to Britain. If the U.S. continues to run such a deficit it will eventually run out of gold. However, before that can happen Humes multi-pronged adjustment mechanism takes hold. First, the U.S. money supply is reduced by its loss of gold. Second, the U.S. price level falls. The same time, the British money supply increases and British prices rise. This all happens because by the quantity theory of money, if the velocity of money v and real output q stay the same, this reduction in money m must then reduce the price level p. As a result of these changes in relative prices in the U.S. and Britain, four things happen. First, America decreases its imports of British and other foreign goods, which had become relatively expensive. Second, America's exports increase because America's domestically produced goods have become relatively inexpensive on world markets. Third British consumers import more of America's now more relatively inexpensive goods. And fourth British exports decline because British exports have become more expensive. The matter of fact is that a balance of

payments equilibrium is restored in both Britain and the US by the gold specie flow mechanism.
Now, it is a matter of some debate whether Hume's Mechanism actually works. But what is true, is that the gold standard worked reasonably well at stabilizing the currency markets right up until World War I, however, with the advent of the war, many nations had to temporarily abandon the gold standard to finance their war efforts. This led to inflation and, in particular, to differing rates of inflation to differing countries.
As we explained above. Differing rates of inflation distort the relative value of currencies. Thus when peace returned and nations return to the gold standard, the old exchange rate no longer reflected the true value of the different currencies.

For example, the French Franc was significantly undervalued, as a result, upon its return to the gold standard, the French economy enjoyed an export led boom and France began to accumulate large surpluses of foreign currencies. In contrast, Britain had sustained lower inflation rates than many of its trading partners so its currency was overvalued. As a result, Britain found it difficult to sell its exports and found itself overwhelmed by cheap imports.
By 1930, Britain was so drained of its gold reserves that it had to abandon the gold standard. At that point the U.S. dollar came under similar attack. France in particular began to unload large amounts of its surplus dollars for U.S. gold.
While the Hoover administration first stemmed this gold flow by raising domestic interest rates, this act of contractionary monetary policy also helped push, indeed some would say helped shove, the US further ended the Great Depression. Eventually in 1933, President Roosevelt followed the British in abandoning the gold standard.
With the collapse of the gold standard in the 1930s, countries desperate to create jobs in a depressionary global economy, engaged in so-called competitive devaluations. In particular, they began to devalue their currencies in order to boost exports and reduce imports. However, these competitive devaluations acted in a fact like a beggar thy neighbor trade policy. Jobs created in one country lead to job losses in other countries. These economic pressures in turn contributed to growing political pressures It eventually led to World War II.
It was the harsh lessons of the 1930s that brought the Allied powers to Bretton Woods, New Hampshire in 1944, as representatives from 44 countries met for 22 days to design a new international monetary system.

The new system featured a modified fixed exchange rate system called, a partially fixed or adjustable peg system. This system replaced the gold standard with a U.S. dollar standard. And the U.S. dollar was designated as the world's key currency. There after, most international trade and finance was to be transacted in dollars. And, fixed exchange rate parities for all currencies were set in both gold and dollar terms. For example, the parity of the British pound was set at 12.5 per ounce of gold. Given that the gold price of the dollar was $35 per ounce, this implied an official exchange rate between the dollar and the pound of $35

divided by 12.5, equals $2.80 per one pound. Note, however, that while the Bretton Woods agreement remained wedded to the concept of fixed exchange rates, there was one very important difference. Bretton Woods also provided for a cooperative mechanism in which the exchange rates were only partially fixed. These new partially fixed rates could be periodically adjusted to reflect changes in currency values in a process know as adjusting the peg.

The idea of this new partially fixed or adjustable peg exchange rate system was to provide both the stability of the gold standard's fixed rates. With the adaptability of flexible exchange rates. Through this adaptability, relative price changes across nations could be addressed through periodic and cooperative adjustments in exchange rates rather than through the painful deflations and recessions that have plagued the gold standard.

For the first decade of its existence, the Bretton Woods system was a great success. Under the Marshall Plan created in 1947, the US lent large sums of dollars to Europe for its rebuilding. And these dollars flowed right back into the US for the purchase of machinery, equipment, and consumer goods. However, by the mid 1950s, the European economies had become increasingly self-sufficient. As US exports to Europe slowed, America's strong economy continued to attract foreign imports. At the same time U.S. deficits were further fuelled by an overvalued currency, budget deficits to finance the Vietnam war and growing oversea s investments by American firms.

By the 1960s, with the U.S. trade deficits mounting a huge surplus of dollars began to pile up in foreign banks. As speculative concerns increased that the US would devalue the dollar, many foreign governments began to redeem their surplus dollars for US gold. As US gold reserves fell dramatically, the US government tried unsuccessfully to pressure these foreign governments into retaining their surplus dollars. A surplus that had grown from virtually nothing in 1945 to $50 billion by the early 1970s.

Finally, in August of 1971, a reluctant Nixon Administration abandoned the dollar standard and Bretton Woods. No longer would dollars be redeemable for gold at $35 an ounce. And in the wake of that abandonment the dollar's value fell precipitously.

Unlike the earlier uniform systems of first the gold standard and then Bretton Woods', today's exchange rate system fits into no tidy mold. Without anyones having planned it, the world has moved to a hybrid system known as the managed float. It has these major features. First, a few countries like the United States have a primarily flexible or floating exchange rate. In this approach, markets determine the currency's value and there is very little intervention. Second, other major countries, such as Canada, Japan, and more recently, Britain, have managed but flexible exchange rates. Under this system, a country will buy or sell its currency to reduce the day-to-day volatility of currency fluctuations. A country may also engage in systematic intervention to move its currency toward what it believes to be a more appropriate level. Third, many countries, particularly small

ones, peg their currencies to a major currency or to a basket of currencies. Sometimes the peg is allowed to glide smoothly upward or downward in a system known as a gliding or crawling peg. Some countries join together in a currency bloc in order to stabilize exchange rates amongst themselves. These countries then allow their single currency to float flexibly relative to those of the rest of the world. The most important of these blocks is the European Union, which in 1999 moved to a single currency, the Euro. FInally, almost all countries tend to intervene either when markets become disorderly or when exchange rates seem far out of line with the existing price levels and trade flows. Government exchange rate intervention occurs when the government buys or sells its own or foreign currencies to affect exchange rates. For example, the Japanese government on a given day might buy $1 billion worth of Japanese yen with US dollars. This would cause a rise in value or an appreciation of the yen. In general, a government intervenes when it believes its foreign exchange rate is out of line with its currency's fundamental value. An excellent historical example of such intervention on a broad scale is offered by the actions of the so-called Group of Seven Nations. In 1987, this group, the US, Germany, Japan, Britain, France, Italy, and Canada. Agree to stabilize the value of the dollar relative to the other countries currencies. The problem was that during the previous two years, the dollar had declined rapidly because of large US trade deficits, and the G-7 nations other than the US were worried that any further weakening of the dollar Would stifle their exports and more broadly, disrupt economic growth. So these nations agreed to purchase large amounts of dollars to boost the dollar's value.

Our next question is this. How does the United States maintain a chronic trade deficit even though it operates under a largely flexible exchange rate system? Under such a system, shouldn't there be a natural adjustment of the US balance of payments due to the forces of supply and demand? After all, US trade deficits should lead to a surplus of dollars and foreign exchange markets and thereby drive down the dollar's value. This, in turn, should lower the price of the country's exports, increase the price of its imports, and restore balance to US trade flows. But such an adjustment process has not worked particularly well in curbing the chronic trade deficits of the United States. The question is why, and the answer lies in first understanding the nature of the US trade deficit. There are several reasons for persistent US trade deficits. The first, of course, is the large chronic budget deficits that began in the 1980s. As we have discussed, the need for the government to finance these budget deficits drove up interest rates, strengthened the dollar, made exports more expensive and imports cheaper, and sent the trade deficit spiraling upward. That's not all. A declining savings rate in the U.S. has also been a major contributing factor to the trade deficit problem in this sense. As the U.S. savings rate has fallen Investment rate has remained fairly stable, or even increased. This is impossible because foreign investment has filled the savings investment gap. One result is that US have been able to save less while consuming more. And at least part of that

increase consumption has been on imported goods. In this sense, the US capital surplus may not only result from the trade deficit. But also help cause it. These two major causes of the U.S trade deficit are each driven, in some degree, by U.S domestic fiscal and monetary policies. Because this is so, we must now come to understand how the conduct of domestic, fiscal and monetary policies in a global economy, can affect not only the domestic countries trade balance. This conduct can also significantly affect the rates of growth and unemployment in the domestic country's trading partners.

And here's the punch line. Any imbalances in either capital or trade flows in one country, will affect all trading partners. This means, for example, that the U.S. trade deficits and capital surpluses are not just domestic headaches. They're global problems as well. Perhaps the best way to understand this important point, is to illustrate the mechanisms through which domestic fiscal and monetary policies actually affect the global economy. Let's look at fiscal policy first. Suppose then that America's GDP falls. This might happen as a result of contractionary fiscal policy to slow inflation or it may simply be that demand in the private sector is weak. Regardless of the reason, the result is the same. And it is illustrated in the chain of causality in this figure. Lower income in America, you, leads to lower exports from Europe, ImA. And the flip side of this coin, of course, is that as European exports. E X E to the U.S falls. So too, does European income, Y E. In other words, America's domestic fiscal policy can not only lead to a contraction in the American economy, it can also function as a contractionary fiscal policy for Europe, as well. In some textbooks, this chain of causality is referred to as the multiplier link. And from this multiplier link, you can perhaps see why it has grown increasingly important for countries to coordinate their fiscal policies. For example, suppose that America wants to reduce its trade deficit with Japan, based on our discussions thus far. One way to do this, might be for the U.S. to adopt a more contractionary fiscal policy. However, such a policy might not be politically acceptable on the home front if the U.S. economy is in recession. Alternatively, the U.S. might encourage Japan to adopt a more expansionary fiscal policy as a way of stimulating Japanese demand for U.S. imports. And strengthening the yen, relative to the dollar. In fact, this is precisely the kind of request that an American president might make to the Japanese prime minister at a bi-lateral trade summit. And such a coordinated macro-economic approach can work. And only if each country benefits. For example, if Japan is in a recession with low inflation, it may well agree to the fiscal expansion. However, if Japan is at or near full employment, it may simply refuse any fiscal stimulus for fear of igniting inflation. Now lets look at the impact of domestic Monetary Policy on A Global Economy. Specifically, let's consider what happens in Europe, when America raises its interest rates through contractionary monetary policy. This is illustrated in this figure. As America's interest rate, rA, rises. Investors sell European financial assets, and buy American financial assets. This leads to an appreciation of the dollar, es. And a depreciation of European currencies. This in

turn, increases Europe's net exports, Exe, and thereby raises European output and income, Ye. Note however, there is an important offsetting effect. Particularly, higher interest rates in America tend to raise European interest rates, rE. These higher rates tend to depress domestic investment in Europe, Ie, and thereby lower Europe's output, Ye, and employment. In other words, in its attempt to fight domestic inflation, the federal reserve of the United States has increased the chance that Europe will experience a recession. In some textbooks, this chain of events is referred to as the monetary link. And here is an important point regarding this link. Unlike with fiscal policy, in the multiplier link, the overall impact of monetary policy and the monetary link on domestic GDP is ambiguous and will depend on the particular situation. This point is reinforced in this figure. It illustrates the impact of contractionary monetary policy in a closed versus an open economy. Note that in a closed economy, a cut in the money supply reduces consumption and investment and helps relieve inflation pressures. However, if the money supply reduction increases domestic interest rates. This may trigger additional capital inflows and these increase capital inflows, may frustrate monetary policy by increasing the money supply and holding down interest rates. These lower rates in turn may increase aggregate demand. The increased capital inflows may also tend to increase the value of the U.S dollar, and widen the trade deficit. Our bottom line here, is that the net impact of the contractionary monetary policy on domestic GDP is theoretically ambiguous, and will depend on the individual case. However, what should be unambiguous from this example, is the critical importance of globally coordinating not just fiscal policy but monetary policy as well. A more real world example should strongly reinforce this point at the same time that it highlights the difficulties of achieving such coordination.

In the late 1970's, in the aftermath of the demise of Bretton Woods and the dollar standard, the nations of Europe established a fixed exchange rate system, pegged to the German mark. These nations did so in the hopes of avoiding a repeat of the competitive devaluations and economic disruptions that had plagued Europe in the 1930's after the collapse of the gold standard. In fact this European Monetary System worked reasonably well for over a decade. However, in 1990, the reunification of Germany resulted in large budget deficits as West Germany subsidized East German industry.

To cope the result in inflationary pressures, the Bundesbank, the German equivalent of the Federal Reserve, significantly raised interest rates. Here, German monetary policy was clearly uncoordinated with that of its neighbors. That is, it was being used for domestic macroeconomic management without regard to its impact on Germany's trading partners. The results, however, were severe. Faced with rising German interest rates, other European countries within the European monetary system, had to raise their interest rates to prevent their currencies from depreciating against the German mark, and moving outside the prescribed range of parities. These interest rate increases, along with a worldwide recession, pushed Euroupe outside of Germany into an ever-deepening recession.

Eventually, the European monetary system was brought down by speculators who believed that the beleaguered countries would not continue to tolerate unrealistic exchange rates and high interest rates. One by one, currencies came under attack, the Finish mark, the Swedish crown, the Italian lira, the British pound, Spanish pesetas and the system collapsed. Macroeconomic lesson of this crisis, is that a country cannot simultaneously have fixed exchange rates, open capital markets, and an independent monetary policy. In the wake of this crisis, the major European countries resolved this dilemma by moving to a common currency the Euro. This is a step that strongly reinforces the importance of coordinating global macro-policies. Let's conclude this lesson by illustrating the potential benefits of global coordination with the income possibility curve in this figure. Say that both Europe and America find themselves stuck at point U, with high unemployment and low incomes. And that the problem is due to high interest rates, stubborn government deficits, and strong protectionist lobbies for domestic industries. America considers taking a non-cooperative policy. Perhaps introducing trade barriers and raising interest rates to keep inflation down. And this moves America to its non-cooperative optimum at point NA. Now, Europe, likewise, considers the same kind of non-cooperative policy, restricting trade, appreciating its currency, or increasing purchases from within its borders. In effect, moving to its non-cooperative point at NE. Pursuing these non-cooperative policies along the red colored, NA NE line Nations would not only beggar their neighbors, but beggar themselves as well. The alternative would be to find a cooperative approach that had positive rather than negative spill overs. This might involve lowering trade barriers, having a joint policy in monetary expansion, and tightening fiscal policies to increase savings and investment. If successfully designed and implemented. Such a policy might move both America and Europe out to point c on the income possibility curve.