

## การลงทุน: หัวจักรขับเคลื่อนเศรษฐกิจไทย Thailand's Investment Story

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### บทคัดย่อ

ประเทศไทยกำลังจะใช้กลยุทธ์การเติบโตโดยอาศัยการลงทุนเป็นตัวนำ ซึ่งเป็นกลยุทธ์การลงทุนที่รัฐบาลเป็นผู้ริเริ่มโครงการโครงสร้างพื้นฐานขนาดใหญ่ โครงการขนาดใหญ่ซึ่งรัฐบาลมีส่วนเกี่ยวข้อง ได้แก่ การผลิตไฟฟ้า และปิโตรเคมี ดังนั้นการเติบโตในการลงทุนในวิสาหกิจของรัฐจะเร็วที่สุด

นาแปลงที่มีมากกว่าครึ่งของการลงทุนของประเทศไทย (6,700,000,000 บาท) นั้นเป็นการลงทุนของธุรกิจขนาดกลางและขนาดย่อม (SMEs) ดังนั้นการลงทุนรายย่อยเหล่านี้จึงมีแนวโน้มที่จะอ่อนไหวต่อการเปลี่ยนแปลงทางเศรษฐกิจได้ง่าย จึงจำเป็นที่จะต้องได้รับความช่วยเหลือ และการส่งเสริมจากรัฐบาลอย่างต่อเนื่อง

บริษัทขนาดใหญ่มีแผนการลงทุนระดับปานกลาง แต่ด้วยความสามารถที่มีอยู่และอุปสงค์ที่สูง จึงเป็นไปได้ที่จะลงทุนในด้านอิเล็กทรอนิกส์ สินค้าเกษตร การแปรรูปโลหะ ปิโตรเคมี กระดาษ และการบริการ (การท่องเที่ยว)

ด้วยเงินออมต่อผลิตภัณฑ์มวลรวมในประเทศ (GDP) 32% เทียบกับการลงทุนต่อผลิตภัณฑ์มวลรวมในประเทศ 26% การให้เงินอุดหนุนการลงทุนเพิ่มขึ้น จึงไม่น่าจะเป็นปัญหาแม้ว่าขณะนี้ยังต้องการการลงทุนโดยตรงจากต่างประเทศ (FDI) เพื่อช่วยสนับสนุนการนำเข้าสินค้าทุนจากต่างประเทศ รวมถึงเทคโนโลยีที่ก้าวหน้า และทักษะการบริหารจัดการ อย่างไรก็ตาม

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ตามการไหลของทุนโดยตรงจากต่างประเทศยังคงอยู่ในระดับปานกลาง คือ 2-3 พันล้านเหรียญสหรัฐต่อปี ซึ่งไม่ได้เปลี่ยนแปลงไปจากทศวรรษที่ผ่านมา

ความสำเร็จของกลยุทธ์การเติบโตโดยอาศัยการลงทุนเป็นผู้นำของไทยขึ้นอยู่กับ การส่งออกเป็นอย่างมาก การส่งออกเป็นองค์ประกอบสำคัญที่ช่วยให้ได้มาซึ่งเงินตราต่างประเทศ ที่จำเป็นในการสนับสนุนการนำเข้าสินค้าทุน การลงทุนของไทยมีลักษณะนำเข้าในปริมาณมาก เสมอมา โดยมีการลงทุนด้านนี้ประมาณ 50%

สำหรับส่วนแบ่งการส่งออกในตลาดโลกของไทยยังคงสม่ำเสมออยู่ที่ 1.1% ในช่วง ทศวรรษที่ผ่านมา ทั้ง ๆ ที่มีการลดค่าเงินบาทลง 40% ในปี ค.ศ. 1997 การส่งออกยังคงเป็น วัฏจักรและเกี่ยวข้ออย่างมากกับดัชนีเศรษฐกิจไทยของกลุ่มจี 7 สินค้าส่งออกหลักมีหลากหลาย รวมถึง อิเล็กทรอนิกส์ รถยนต์ และชิ้นส่วนยานยนต์ สำหรับเสื้อผ้าสำเร็จรูปยังคงต้องพึ่งพาสหรัฐ เป็นอย่างมาก จึงค่อนข้างอ่อนไหวได้ง่าย เพราะมีการแข่งขันจากจีนอีกด้วย ซึ่งจีนเป็นลูกค้า หลักด้านเบ็ดเตล็ดและยางพารา ขณะที่ญี่ปุ่นเป็นผู้ซื้อยางพารารายสำคัญของไทย

## **Abstract**

*Thailand is about to embark on an investment-led growth strategy, one in which government-inflated investment in large infrastructure projects will play a key role. Other mega-projects which will involve the government are electricity generation and petrochemicals. Accordingly, growth of state enterprise investments will be the fastest.*

*Surprisingly, over half of Thailand's investment (Bt670bn) is carried out by 1.7mn SMEs. These small-scale investments are therefore likely to be more sensitive to economic changes and will require continuing government assistance and promotion.*

*Large corporates have put in place more modest investment plans, but high capacity utilization and strong demand are likely to prompt investment in the following sectors: electronics, agricultural products, metal processing, petrochemicals, paper, and services (tourism).*

*With gross savings to GDP of 32% versus investment to GDP of 26%, financing increased investment should not be a problem. Even so, foreign direct investment (FDI) is desirable since it helps finance imports of foreign capital goods and embodies technological progress and managerial skills. However, FDI flows remain modest at US\$2-3bn per year and are unchanged from a decade ago.*

*The success of Thailand's investment-led growth strategy also depends very much on exports. Exports are a key demand component and provide the foreign exchange needed to finance the import of capital goods. Thailand's investment has always been import-intensive. We estimate that investment has 50% import content.*

*Thailand's share of world exports has remained constant at about*

1.1% during the past 10 years, notwithstanding the 40% baht devaluation in 1997. Exports remain cyclical and relate closely with G7 leading economic indicators. Major exports are well-diversified and include electronics and automobiles & parts. Garments are highly dependent on the US market, and are therefore vulnerable to competition from China. China is Thailand's major customer for petrochemicals and rubber. Japan is also an important buyer of rubber.

## **Executive Summary**

### **Switch from Demand-Led to Supply-Led Growth Is Logical**

Thailand's economic growth during the next 4-5 years is expected to be driven by investment, particularly in infrastructure projects, a switch from consumption and exports as the main engines of growth. This is because no output gap now exists.

It also appears that the government views private investment plans to be relatively timid. Therefore, the government is likely to initiate various mega projects in the transportation and energy sectors. These are seen as platforms for the private sector to build on, thereby sustaining future economic growth. In this sense, these infrastructure investments are catalysts for private investment. Thus, public investment should "crowd in" rather than "crowd out" private investment.

Transportation, energy, housing and petrochemical projects mentioned by the government run into trillions of baht. But gross savings is 32% of GDP while gross investment is only 26% of GDP. This means that the flow of savings derived from income exceeds actual investment needs by more than Bt200bn annually. On a stock basis, banks are estimated to have excess liquidity defined as an excess of deposits over loans of about Bt300-400bn. Many of the mentioned projects appear financeable from excess domestic savings.

The government also vows that construction of these megaprojects will not come from the budget, which means that the country's fiscal position should not be affected. In the case of the Bt500bn extension of the rail mass transit system, the government is expected to securitize future returns earned from real estate in and surrounding the train stations to pay for construction costs. Various

pension funds and the Social Security fund in Thailand have combined assets of Bt900bn and are expected to be the main buyers of the mass transit bonds. Energy related corporations are also expected to invest in the train mass transit system.

### **SMEs as Major Investors**

What is surprising is the data showing that more than half of Thailand's investments (53.2%) made in 2004 are being undertaken by SMEs (Bt666bn). There are 1.7mn SMEs spread throughout the kingdom. Therefore, their investment are likely to be very small-scale, that is, below Bt1mn each on average since total investment is estimated at Bt666bn.

The resilience of SME investments in coming years could come under question, especially if conditions falter. Therefore, the government is likely to provide significant assistance and soft loans for SMEs. Although it is estimated that over half of SMEs' output (Bt2.1Tn) is exported, a large portion is engaged in retail (41%) and services (mainly tourism, hotels, restaurants) (31%). This means that government will also take care to prop up domestic demand.

### **Investment Growth Breakdown Survey by MoF**

|                          | <b>Average Growth (%) 2005-8</b> |
|--------------------------|----------------------------------|
| Government               | 10.0                             |
| State enterprises        | 30.0                             |
| Private sector           | 16-17.0                          |
| MNCs (100 companies)     | 15.0                             |
| Top 100 listed companies | 15.0                             |
| Residential developers   | 20.0                             |
| SMEs                     | 15.0                             |
| Total                    | 20.0                             |

**Source:** KrungThep Turakit

### **But State Enterprises Will Be Most Aggressive**

In a survey by the Ministry of Finance, it is expected that state enterprises will take the lead in accelerating investment during the next 3-5 years as seen above. State enterprises are expected to consider investing in the following projects:

- Bt500bn to extend the existing 44km train mass transit system in Bangkok to 291km. This is a 20-year plan which Prime Minister Thaksin Shinawatra wants accelerated so it can be completed within six years.

- Bt400bn to revamp the kingdom's railway system. This is part of the government's aim to cut Thailand's logistics cost from 25-30% of GDP to about 10% over the next 5-6 years.

- Bt110bn to purchase 20 more airplanes and refurbish 22 existing planes during the next six years.

- Bt400bn over the next 10 years to increase electricity generation capacity by 15,000 megawatts to meet demand, which is growing at a rate of 8% per annum.

- Bt350bn over the next 4-5 years to invest in gas fields, and build gas pipelines and gas separation plants.

- Bt46bn over the next 4-5 year for petrochemicals. However, the Minister of Energy has indicated that the government wants to promote Thailand's "third wave" of petrochemical industry development, the cost of which is estimated at Bt400bn.

- Bt35bn for the "Land Bridge" in which pipelines are built along with oil depots across southern Thailand, linking the Gulf of Thailand and the Andaman Sea as an alternative shipping route to the Malacca Straits.

**Private Sector Investment**

The following sectors have high capacity utilization rates which are much higher than rates seen in 1995 during Thailand's previous investment boom. We therefore expect to see significant investments in the automobiles and parts, electronics, building materials and agro industries sectors.

The low capacity utilization in the steel and metals sector does not imply lack of demand. In fact, demand is very strong and the market is tight because of inability to acquire sufficient raw materials. In other words, capacity utilization is actually higher than the aggregate figure suggests and steel companies are announcing ambitious investment plans.

Foreign direct investment (FDI) is the most desirable form of private investment for several reasons. First, it is likely to come embodied with modern technology and management. Second, the equity is necessarily long-term in nature and is an explicit vote of confidence for Thailand. Third, it reduces the need to borrow and provides the foreign exchange needed to pay for imported capital goods, thereby stabilizing exchange rates.

However, FDI flows into Thailand have been modest. One way of tracking details of future FDI into Thailand - along with matching domestic capital - is to look at Board of Investment (BOI) investment approval figures, trends of which confirm the capacity utilization arguments above and are summarized below:

- The total value of BOI-approved investment averaging Bt240bn per year during 2001-2004 is only slightly higher than the Bt230 annual average of 1998-2000. This amounts to about 20% of annual private investment.
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- Major sectorial shifts are occurring nonetheless. Thus, investment in agricultural products as a percent of total investment has risen substantially from 8.3% to 13.4%, reflecting Thailand's comparative advantage in this sector.

- The biggest investment sector is still electronics at 21.7%, but this is smaller than the 24.1% portion recorded for 1998-2001.

- On the other hand, the biggest gains have come from the metal processing sector whose share of investment rose from 6.6% to 19.1%. This is a reflection of recent restructuring in the sector as well as the ongoing boom in construction.

- Interestingly, the share of investment in chemical, plastic and paper has fallen from 28.8% to 19.9%. Given the recent strong cyclical uptrend in these sectors, it appears likely that investment in these sectors is bound to revive again in the coming years.

- The same argument can be made for the service and infrastructure sector which has seen its share of total BOI-approved investment dwindle from 28.8% to 19.9%.

### **The Importance of Exports**

Notwithstanding the reliance on investment as the main engine of growth, we see exports as playing an important role. Exports, which account for 60% of GDP, continue to be an important demand component. Also exports finance the need for imported capital goods which we believe to be considerable. It is clear that in the past, a surge in investment was accompanied by similar surges in imports. Moreover, we estimate that the import content of investment is likely to be about 50%, much higher than government estimates of 25%. While Thailand's exports have performed extremely

well during the past couple of years, the weight of evidence suggests that Thai exports have not become more competitive during the past decade because Thai exports as a percent of world exports have remained constant. Exports remain cyclical and closely track economic conditions of G7 countries, as represented by their leading economic indicators.

In terms of competitiveness by product, we note the following:

- The automobile sector is the best performer, taking advantage of the baht devaluation. The share of exports of this sector has quadrupled from 1.4% to 5.6%. This sector now ranks as Thailand's second-biggest export sector.
- Petrochemical exports have risen from 0.7% to 3.1% of total exports.
- Iron and steel exports have also increased as its share of total exports nearly doubled from 1.3% to 2.5%.
- Electronics remain Thailand's most important export, accounting for 14% of total exports. But growth rates are expected to be modest going forward.
- The garment sector continues its decline notwithstanding the baht's 40% devaluation since 1997. Its share of total exports fell from 7.3% to 3.2%.
- The share of agriculture to total exports continues to fall and is now less than 10% of total exports.

In terms of key markets, exports of integrated circuits and computer parts are sold to all major markets globally and are therefore fairly well-diversified geographically. Garments are highly dependent on the US and EU markets and vulnerable to China after expiration of the

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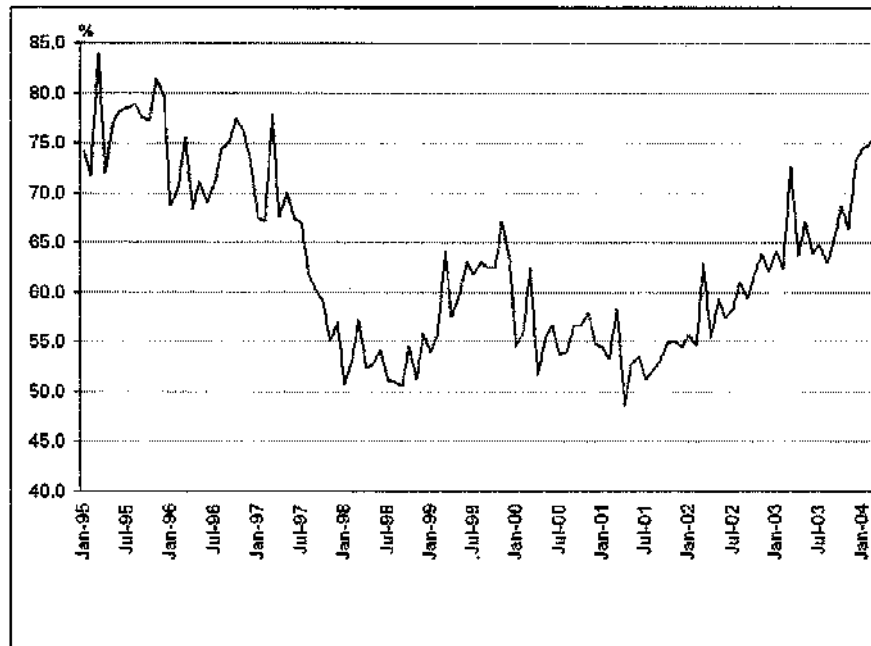
Multifiber Arrangement in 2005. Thailand's exports of television and parts are highly dependent on the US and Japanese markets. Finally, China is Thailand's major customer for petrochemicals and rubber. Japan is also an important buyer of rubber.

### **1. From Demand to Supply-Led Growth**

During the past 4-5 years, exports and consumption supported by government spending were the main engines of demand-led growth. Now that Thailand's output gap no longer exists and concerns are being expressed about rising consumer debt, the government is embarking on an investment-led growth strategy. Investments in various mega-projects in the transportation and energy sectors are seen as platforms for the private sector to build on, thereby sustaining future economic growth. In this sense, these infrastructure investments are catalysts for private investment. Thus, public investment should "crowd in" rather than "crowd out" private investment.

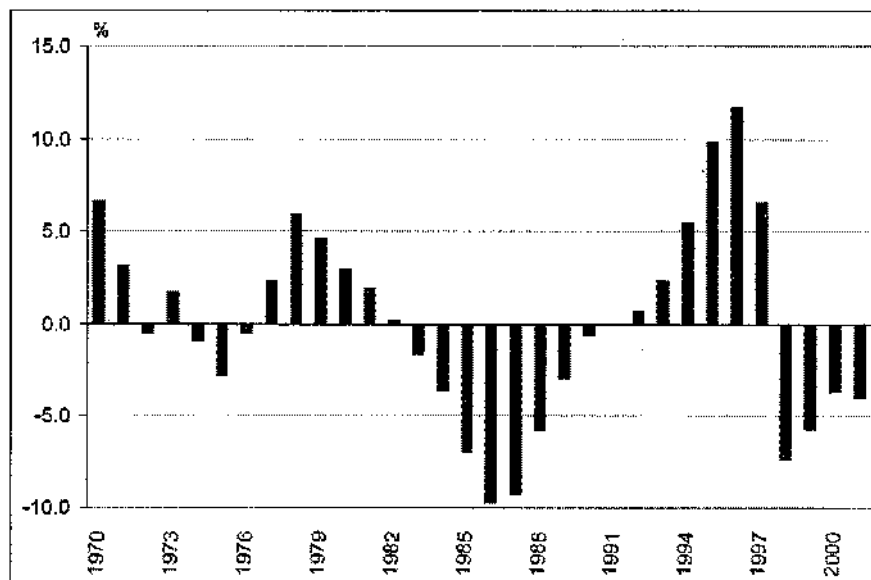
There is little to dispute the basic contention that the Thai economy will be primarily supply-constrained in the coming years, as seen by capacity utilization data and output gap calculations below. In other words, it is clear that over the long term, Thailand needs to expand production capacity.

Chart 1: Capacity Utilization



Source: BoT

Chart 2: Output Gap



Source: Phatra estimate

Looking ahead, the key is to gauge Thailand's success in implementing this "supply-led" growth strategy. Will the government's mega-projects enhance or "crowd out" private investment? How will various projects be financed? What are their implications on the current account, interest rates and the exchange rates? As we illustrate below, there are good reasons for believing that Thailand's investment-led strategy can succeed. However, we also point out several risk factors.

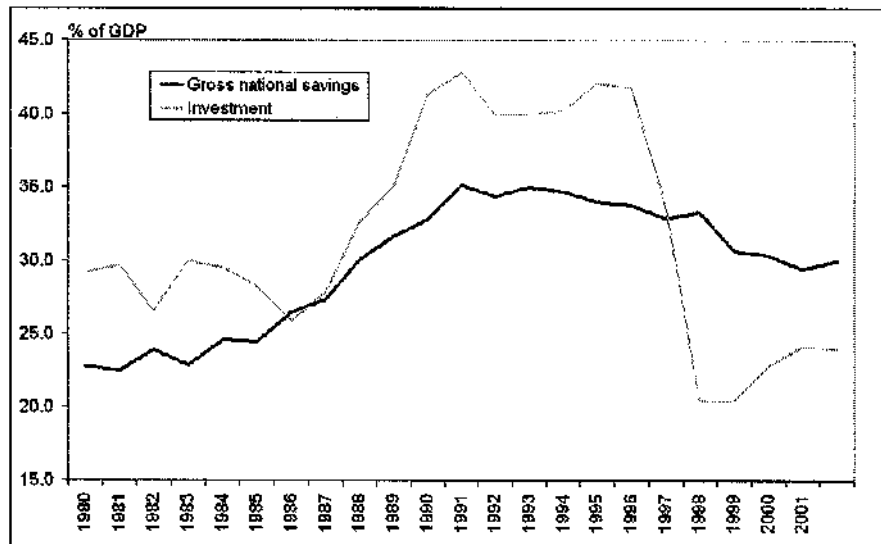
## **2. There Are Enough Savings**

The most obvious question is whether Thailand has the savings to finance the needed increase in investment. The answer is clearly, yes. Gross savings is 32% of GDP while gross investment is only 26% of GDP. This means that the flow of savings derived from income exceeds actual investment needs by more than Bt200bn annually. On a stock basis, banks are estimated to have excess liquidity defined as an excess of deposits over loans of about Bt300-400bn.

Note that these excess savings exist even as Thailand's real interest rates are negative, if nominal interest rate on deposits (1.0%) is compared with headline inflation (average at 2.7%). Since the Bank of Thailand has begun hiking short-term interest rates, chances remain good that the economy's savings rate will not fall. Indeed, the Minister of Finance has recently stated that he wants to encourage (through various tax breaks) an increase in the country's savings rate from 32% to 34% of GDP. The authorities are clearly signalling their intention to strengthen the country's savings base to ensure that planned investments will be financiable. Thailand's monthly current account

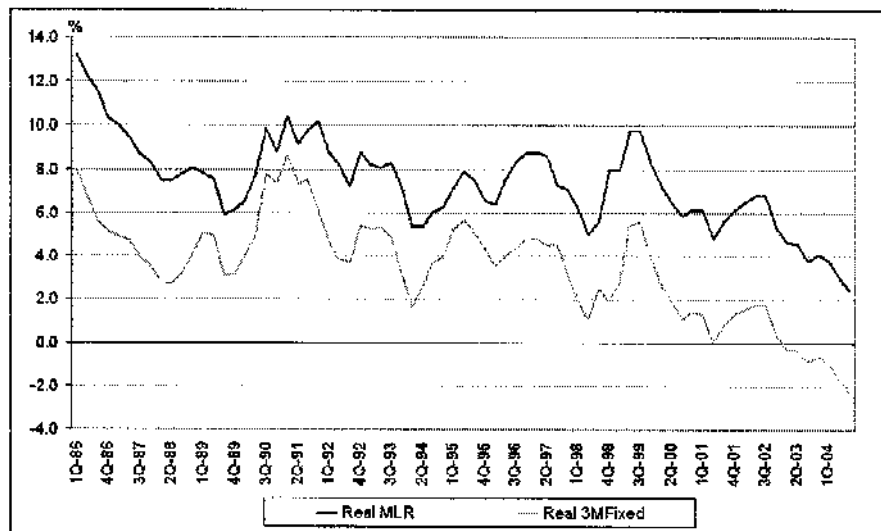
surplus of about Bt12bn (equaling 22% of base money) also means that increases in investment will not be constrained by external balance considerations.

**Chart 3: Savings/GDP and Investment/GDP**



Source: NESDB

**Chart 4: Real Interest Rates**



Source: BoT

For 2004, investment is estimated to be Bt1.7Tm versus savings of about Bt1.9Tm. If nominal savings rise at an annual rate of 8-9% (the same rate as nominal GDP which assumes real growth of 6% and inflation of 2-3%), then nominal investment can grow at an annual rate of 16% in order for investment to eventually equal savings in 2006. In other words, it is possible for investment to grow at a rate that is twice as fast as GDP over the next several years without causing undue economic imbalances. It is in this sense that investment can qualify as the main engine of economic growth.

### **3. Financing Government Projects through Securitization**

It is one thing to say that there are plenty of savings in the system, and quite another to define the mechanism that would channel them to finance the government's mega-projects. The government has promised that its proposed transportation projects would use minimal amounts of government money such that public debt as a whole would not increase substantially. Currently, public debt is only 45% of GDP compared to the MoF's target of not more than 55% of GDP. Therefore, there is room for the government to spend money on investment projects.

The centerpiece of the government's mega project is the Bt500bn that it will spend to extend the existing 44km train mass transit system in Bangkok to 291km. This is a 20-year plan which PM Thaksin wants accelerated so that it can be completed within six years. Like other mass transit projects, this one is expected to provide only modest overall returns. Thus, the plan is to give a concession to the private sector to finance the "rolling stock", that is, to pay for the train and its operations in return for much of the profit. This portion, which is therefore readily financiable by the private sector, is estimated to account for about 20-25% of the project.

The challenge is finding the proper way to finance the construction of the tracks and other infrastructure, which is expected to cost Bt350-400bn. We expect that the government plans to allocate no more than 10% of this cost from the annual investment budget. The main means of raising funds for the project is thought to be the securitization of returns to be earned from the commercial space in the subway stations as well as the real estate in the surrounding area.

For example, the government would establish a company that would have the right to receive earnings from the commercial space and real estate and thus would be able to issue securitized bonds that would then be used to finance the mass transit project. It is hoped that if the effort is successful, the mass transit entity itself could be listed in the stock market in order to raise additional funds.

The government is confident that there will be appetite for these bonds, and that the main buyers would be the Government Pension Fund, the Social Security Fund and various provident funds. It is estimated that these funds have assets valued at Bt300bn each meaning that their combined asset value is close to Bt1Trn. Currently, about 80% of these fund portfolios are likely to be invested in cash and bonds.

In addition, the government would expect related state enterprises to invest in the mass transit project. These include the Electricity Generating Authority of Thailand, the Oil Fund and other state enterprises related to energy. Also, the government could raise money by increasing annual registration fees for automobiles and raising energy taxes. The latter two measures are, however, likely to be used as a last resort since they could prove unpopular while raising only marginal amounts of money.

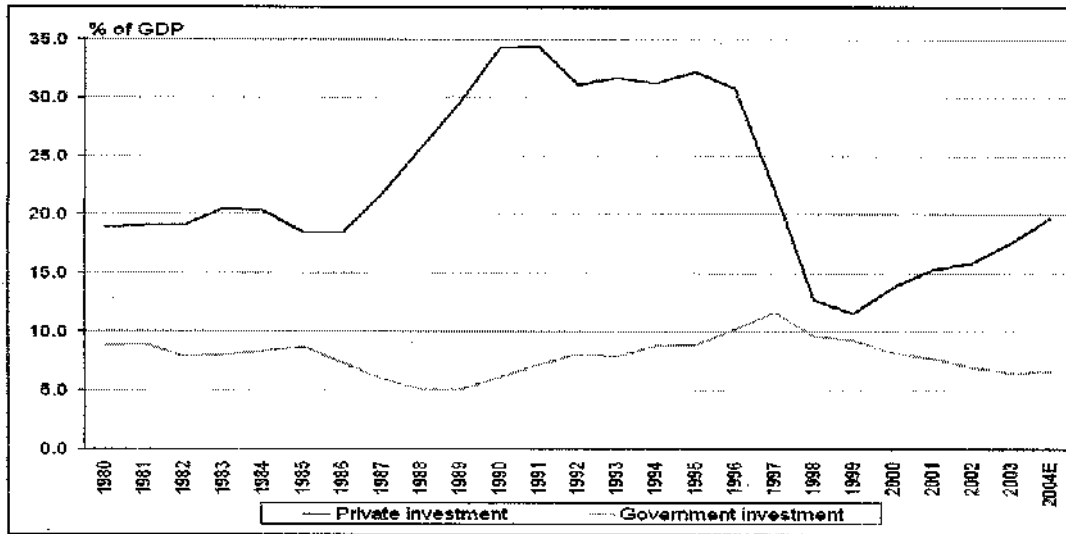


Finally, the government earlier indicated that a significant source of future revenue could be the extensive land holdings of the Treasury Department (TD) which, so far, are extremely underutilized in the sense of generating miniscule returns. According to government statistics, total land holdings of TD is 12.5mn rai (2.5 rai = 1 acre). This land is valued at Bt11.5Tm or 160% of GDP. However, 99.3% of the land is used by government agencies and provided free of charge to low income farmers. The remaining 0.7% or only 90,000 rai is used for commercial purposes and is providing a revenue of Bt1.0-2.0bn annually to TD. This does not mean that it would be easy to quickly obtain more land for commercial use. Instead, the TD Director General indicates that only the 90,000 rai is suitable for commercial use.

#### **4. Thailand's Investment Stories**

##### **Government Investment**

The preferred approach is for the private sector to take the lead on investment. This has been happening to some extent. During the past several years, government investment has been below average, notwithstanding the impression that government spending has been aggressive. This is due to the attempt to instill fiscal discipline by not initiating any new costly projects during that period.

**Chart 5: Investment as a Percent of GDP (Nominal)**

Source: NESDB Phatra estimates

Private investment has recovered from an all-time low of 11% of GDP in 1999 and is now close to 20% of GDP. There is still a gap from the past average of about 22-24% during normal upcycles. What is interesting, however, is that government investment has been declining as a percent of GDP since the 1997 crisis, to only 6% of GDP in 2004. The fact is the government has been significantly underspending its investment budget during the past three years. In fiscal year 2004, investment spending was only 70% of the Bt272bn investment budget.

This may be surprising to some, given the impression that the government is a keen spender. In fact, during the past three years, the government has been spending at the grass roots level where absorptive capacity is low. Therefore, government investment as a percentage of GDP has been declining markedly. What about off-budget items? Our best estimate is that total government exposure in

such schemes amounts to no more than about 3-4% of GDP. As long as GDP continues to grow in the 5-6% range, it is likely that any eventual contingent liabilities arising from these exposures will be low—say, 1-2% of GDP. This can be considered a small price to pay for various government schemes aimed at redistributing wealth and opportunities more equally to uplift the underprivileged majority in the rural sector. The schemes have also been popular and are clearly underpinning the approval rating of the current government.

### Shift Towards Mega-Projects

The government clearly indicates that it intends to switch gears and push ahead with a long list of large-scale infrastructure projects. Thus, government investment spending will rise substantially during the next 4-5 years. Dr. Olarn Chaipravat, advisor to the Finance Minister, has declared that government investment will grow at twice the rate of private investment in the coming years. Based on the government's survey during August-September, Dr. Olarn provided a breakdown of investment as outlined in the following table.

**Table 1: Investment Breakdown Survey by MoF**

|                                  | Total Investment<br>(Bt Bn) | Percent of Total<br>(%) |
|----------------------------------|-----------------------------|-------------------------|
| Government and State enterprises | 432                         | 25.6                    |
| Private sector                   | 1,253                       | 74.4                    |
| Top 100 listed companies         | 273                         | 21.8                    |
| Residential developers           | 250                         | 20.0                    |
| SMEs                             | 666                         | 53.2                    |

**Source:** KrungThep Turakit

Several important observations can be made:

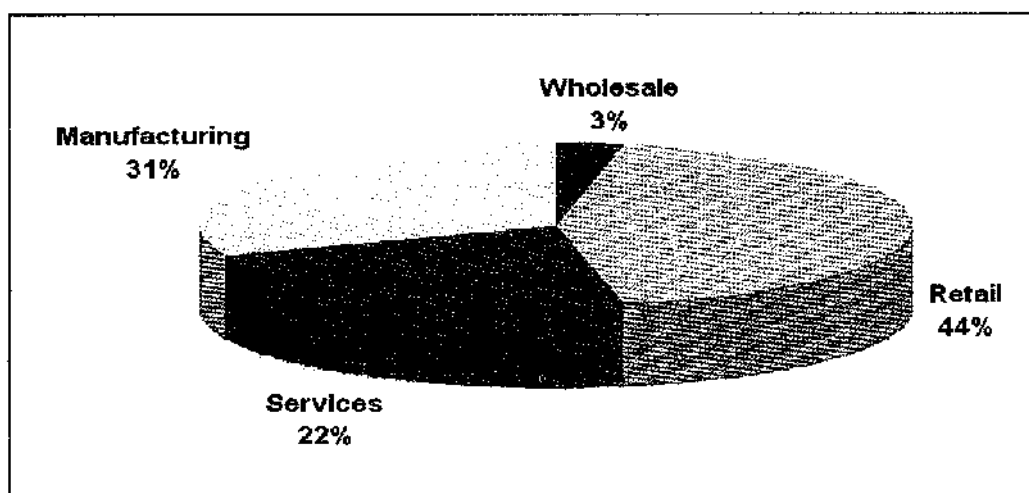
- More than half of investments (53.2%) made in 2004 are being undertaken by SMEs (Bt666bn). There are 1.7mn SMEs spread throughout the kingdom. Therefore, their investments are likely to be very small-scale, that is, below Bt1mn each on average since total investment is estimated at Bt666bn. We believe there are grounds to question the resilience of these investments in the coming years, should economic conditions become less favorable.

**Table 2: Small and Medium Enterprises in Thailand (2002)**

|                      |  |
|----------------------|--|
| Number of SMEs       | 1,639,427 units (99.6% of total establishments)            |
| Total GDP of SMEs    | Bt2,112bn (39% of total GDP)                               |
| Employment by SMEs   | 4,999,217 persons (69% of total employment)                |
| Value of SME exports | Bt1,209bn (38% of total exports of manufacturing products) |

Source: Office of SME Promotion

**Chart 6: Breakdown of SME Businesses**



Source: Office of SME Promotion

● The 100 large SET-listed companies are investing a modest Bt273bn or 22% of total private sector investment. Investments are being made in the following sectors: automobiles and parts, electronics, construction, energy and office equipment (more on the types of investments in a later section). This is likely to be seen as inadequate by the government. It is for this reason that the government will take it upon itself to initiate several mega-projects that would further jump-start private investment.

● Government and state enterprises account for 25.6% of total investment, much higher than in the past years although different classifications may be part of the reason for the high proportion of public sector investment.

● Investment in the real estate sector at 20% of total investment remains significant. It is for this reason that the Bank of Thailand has continued to keenly monitor activity in the real estate sector.

More importantly, Dr. Olarn estimates state enterprises will take the lead in accelerating investment during the next 3-5 years, as seen in the following table.

**Table 3: Investment Breakdown Survey by MoF**

|                          | <b>Average Growth (%) 2005-8</b> |
|--------------------------|----------------------------------|
| Government               | 10.0                             |
| State enterprises        | 30.0                             |
| Private sector           | 16-17.0                          |
| MNCs (100 companies)     | 15.0                             |
| Top 100 listed companies | 15.0                             |
| Residential developers   | 20.0                             |
| SMEs                     | 15.0                             |
| <b>Total</b>             | <b>20.0</b>                      |

**Source:** KrungThep Turakit

Again, we make the following observations:

- The estimated growth in investment at 20% per year is more than twice as fast as nominal GDP (8-9%). Investment is clearly expected to be the engine of growth for Thailand in the coming years.

- State enterprises are expected to be in the forefront, with investment from this sector expected to rise at an annual rate of 30%. The second fastest-growing sector is expected to be the real estate sector.

- In keeping with its promise of fiscal discipline, government investment (both central and provincial) is expected to grow the slowest at 10% per annum.

- Interestingly, the 100 largest SET-listed companies and foreign direct investment (FDI) are expected to grow at a more moderate pace of 15% per annum.

- SME investment is also expected to grow 15% per year. We regard this component as likely to be the most volatile.

### **State Enterprise Investments**

State enterprises are expected to invest in the following projects:

- Bt500bn to extend the existing 44km train mass transit system in Bangkok to 291km. This is a 20-year plan which PM Thaksin wants accelerated so that it can be completed within six years.

- Bt400bn to revamp the kingdom's railway system. This is part of the government's aim to cut Thailand's logistics cost from 25-30% of GDP to about 10% over the next 5-6 years.

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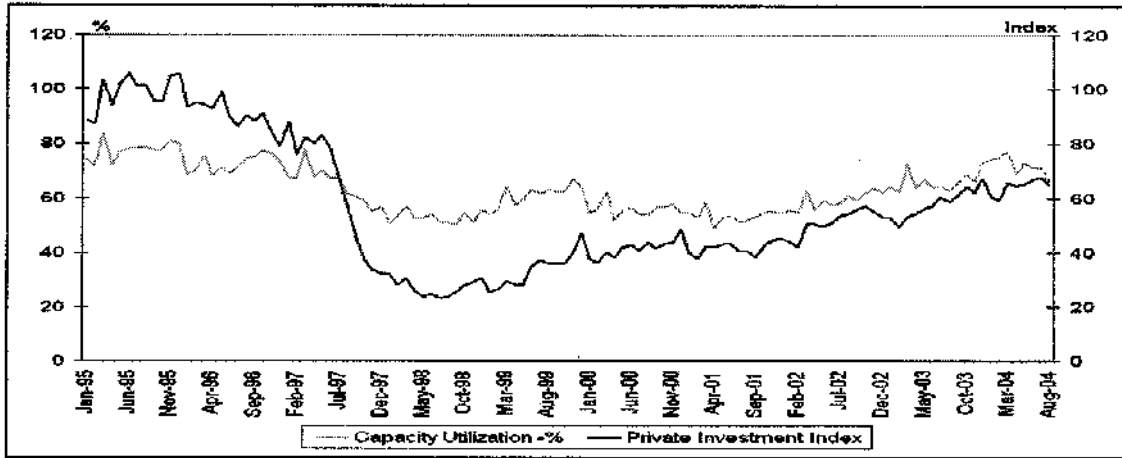
- Bt110bn to purchase 20 more airplanes and refurbish 22 existing planes during the next six years.
- Bt400bn over the next 10 years to increase electricity generating capacity by 15,000 megawatts to meet demand which is growing at a rate of 8% per annum.
- Bt350bn over the next 4-5 years to invest in gas fields, and build gas pipelines and gas separation plants.
- Bt46bn over the next 4-5 years for petrochemicals. However, the Minister of Energy has indicated that the government wants to promote Thailand's "third wave" of petrochemical industry development, the cost of which is estimated at Bt400bn.
- Bt35bn for the "Land Bridge" in which pipelines are built along with oil depots across southern Thailand, linking the Gulf of Thailand and the Andaman Sea as an alternative shipping route to the Malacca Straits.

At the high end, state enterprise investments and government-sponsored investments could amount to Bt2Trn over the next 5-6 years. At the low end — assuming that much of the investment in petrochemicals, the railway system and the Land Bridge can be delayed — the amount of investment would be close to Bt1.5Trn.

#### **Private Sector Investments**

Private investment has been increasing rapidly from depressed levels in 1998. However, as seen in the following chart, the recovery of private investment is still well below previous levels even though capacity utilization in 2004 has regained the levels attained in 1994-95, which were then considered peak capacity utilization that prompted an acceleration of private investment.

**Chart 7: Capacity Utilization and Private Investment Index**



Source: BoT

Our point is that, notwithstanding investment growth during the past five years, the private sector generally remains cautious so that growth of private investment remains well below past levels and at the same degree of capacity utilization.



**Table 4: Capacity Utilization by Sector**

|                             | 1995-96     | 2003        | Jan-Sep 04  |
|-----------------------------|-------------|-------------|-------------|
| Tyre                        | 90.1        | 106.3       | 119.7       |
| Upstream petrochemical      | 76.2        | 104.4       | 99.7        |
| Pulp                        | 77.6        | 95.5        | 98.8        |
| Motorcycle                  | 78.0        | 83.0        | 97.0        |
| Zinc metal                  | 90.3        | 100.0       | 96.1        |
| Integrated circuit          | 77.1        | 87.7        | 90.8        |
| Battery                     | 80.5        | 78.9        | 88.7        |
| Synthetic fiber             | 87.4        | 78.0        | 86.6        |
| Petroleum products          | 89.5        | 79.5        | 84.6        |
| Wire rod                    | 68.4        | 73.1        | 83.5        |
| Galvanized iron sheet       | 68.2        | 87.6        | 83.5        |
| Compressor                  | 64.3        | 69.1        | 83.4        |
| Milk products               | 64.3        | 70.0        | 80.3        |
| Commercial car              | 88.7        | 67.2        | 79.6        |
| Electric motor              | 88.0        | 67.8        | 77.0        |
| Hot & cold rolled sheet     | 64.0        | 79.7        | 74.7        |
| Passenger car               | 58.1        | 60.5        | 72.4        |
| <b>Total</b>                | <b>75.0</b> | <b>66.3</b> | <b>72.0</b> |
| Glass sheet                 | 93.7        | 70.4        | 68.7        |
| Canned seafood              | 45.2        | 71.9        | 68.0        |
| Block rubber                | 73.1        | 71.4        | 65.7        |
| Beer                        | 73.7        | 63.6        | 65.4        |
| Steel bar & shape steel     | 58.0        | 54.4        | 65.0        |
| Tinplate                    | 51.6        | 53.6        | 63.2        |
| Steel pipe                  | 72.4        | 60.7        | 62.5        |
| Cement                      | 88.0        | 57.6        | 62.4        |
| Tin metal                   | 32.4        | 48.4        | 60.0        |
| Tobacco                     | 79.7        | 55.8        | 60.0        |
| P.C. wire & P.C. stand wire | 65.8        | 48.2        | 56.8        |
| Liquor                      | 89.6        | 51.2        | 54.9        |
| Canned pineapple            | 43.2        | 53.2        | 54.4        |
| T.V.                        | 61.1        | 51.3        | 51.8        |
| Sugar                       | 30.3        | 36.1        | 36.1        |

Source: BoT

Ranking capacity utilization by sector and comparing the periods 1994-96 and 2003-4, we note that currently there are about a dozen economic sectors with very high capacity utilization. In many cases, these utilization rates are also above highs previously attained in 1994-96. Moreover, these industries are broad-based covering major sectors such as automobiles and parts, electronics, building materials and agro industries.

Interestingly, the low capacity utilization in the steel and metals sector does not imply lack of demand. In fact, demand is very strong and the market is tight because of inability to acquire sufficient raw materials. In other words, capacity utilization is actually higher than the aggregate figure suggests. In other words, capacity utilization is actually higher than the aggregate figure suggests and steel companies are announcing ambitious investment plans.

### **Foreign Direct Investment**

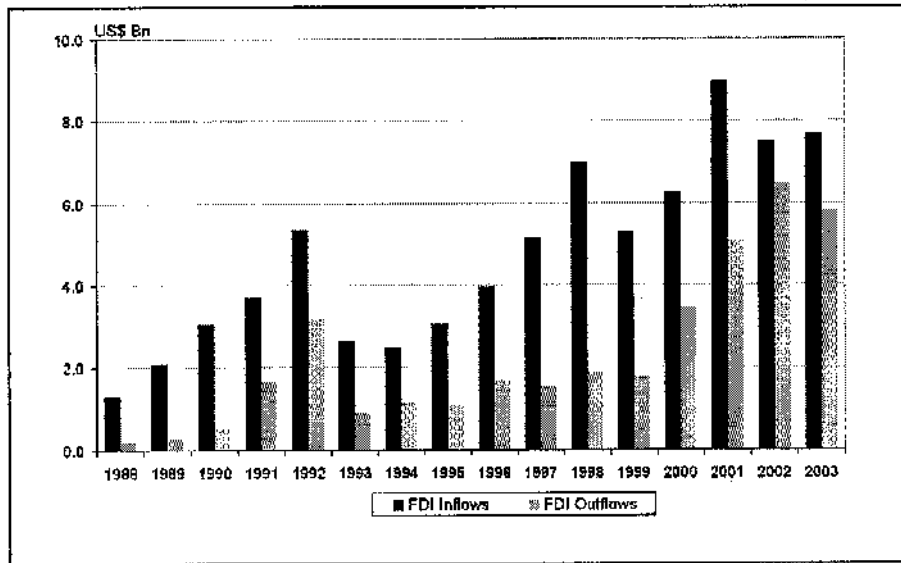
Finally, a few words on foreign direct investment (FDI). As seen below, net FDI has been modest in recent years, amounting to only about 2.0% of GDP. But FDI has never been large as a percent of GDP, peaking at only 2-3% of GDP in the late 1980s. At that time, overall investment accelerated, enabling Thailand to record double-digit growth in GDP. The spike in FDI (close to 5% of GDP) at the peak of Thailand's economic crisis in 1998 can be explained by Japanese multinational companies providing capital to support their failing affiliates in Thailand as well as massive capital-raising by Thai banks, which saw foreign holdings rise from less than 25% to 49% and more in some cases. As the situation returned to normal from about 2002 onwards, net FDI has fallen back to about 1% of GDP (or US\$1.5-2.0bn), the average attained during the 1970s and first half of the 1980s.

Ideally, foreign direct investment is the most desirable form of investment for several reasons. First, it is likely to come with modern technology and management. Second, the equity is necessarily long-term in nature and is an explicit vote of confidence for Thailand. Third, it reduces the need to borrow and provides the foreign exchange needed to pay for imported capital goods, thereby stabilizing exchange

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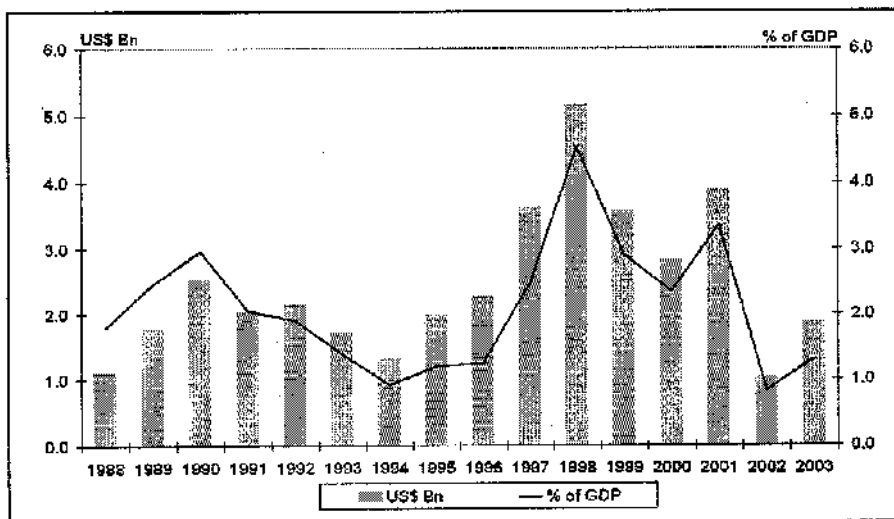
rates. One could argue that reforms and liberalization have not gone far enough. But it could also be that global savings are being diverted, mainly to China and the United States.

**Chart 8: Foreign Direct Investment**



Source: BoT

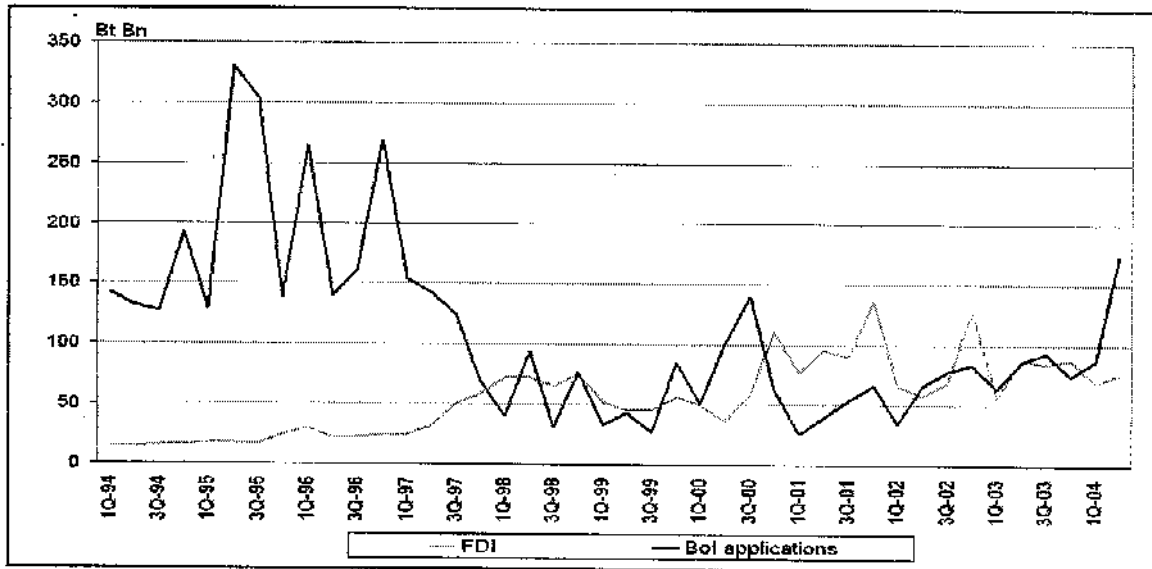
**Chart 9: Net Foreign Direct Investment**



Source: NESDB, BoT

Since most foreign investors seek Board of Investment (BOI) privileges such as tax holidays and capital equipment import tariff exemptions, examining BOI data can be a good leading indicator of FDI. Since BOI data reflect joint ventures with local firms, its data would provide better coverage of the real sector than FDI data alone. We therefore select this data to represent a broader picture of FDI activity in Thailand. However, as seen below, the often-publicized BOI applications data do not correlate well with FDI.

Chart 10: BOI Application and Gross FDI

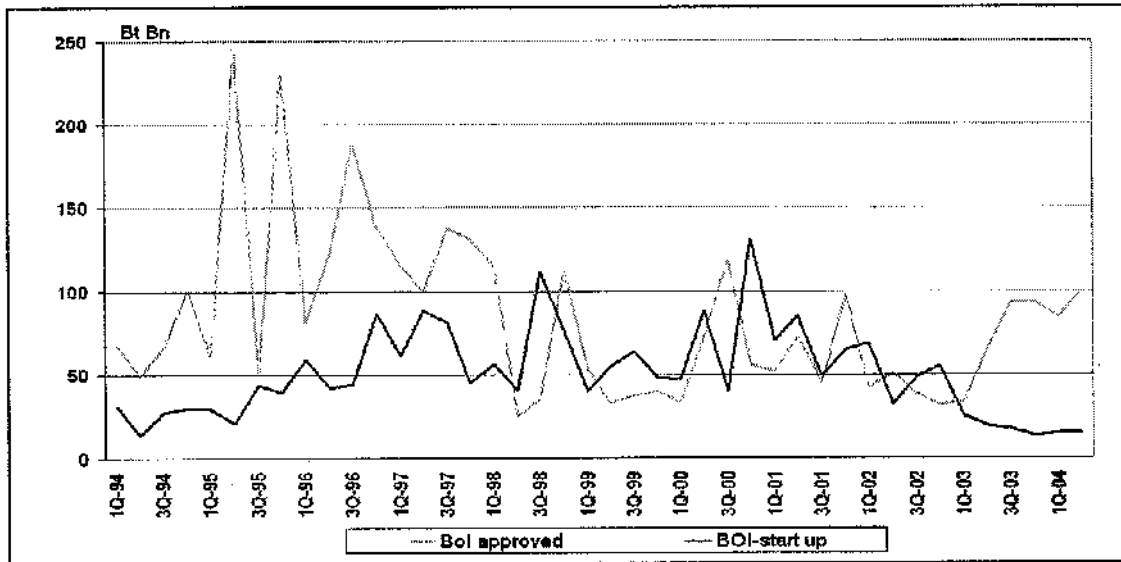


Source: BoT, BoI

It is interesting to note from the chart above, however, that BOI applications did surge since the end of 2003, which could foretell much more actual investments in the coming years. We would, however, prefer to look at BOI-approved investment which, to us, has a greater likelihood of starting up. As seen in the chart below, the relationship between approved investment and start-ups exists but

does not appear to be a strong one. This is especially so during the past two years, where start-ups have conspicuously lagged approved projects.

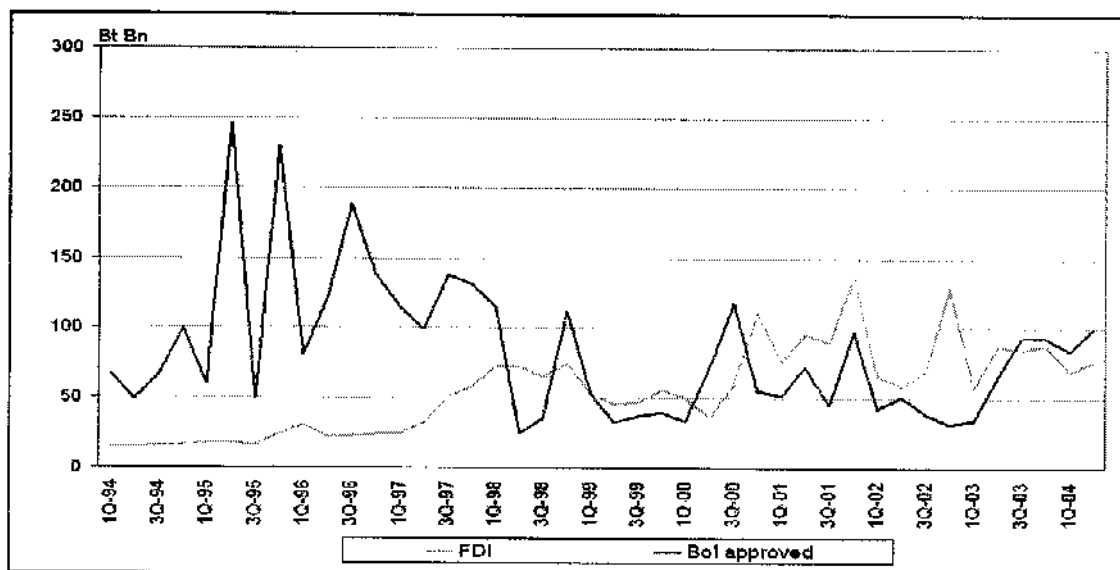
**Chart 11: BOI Approved and Start-Ups**



Source: BoT, BoI

We would, nonetheless, use BOI-approved investment as a main leading indicator of FDI because the relationship appears to be strongest. This is especially so since private investment as a whole began its recovery from 1999 onwards, as seen in the following chart.

Chart 12: BOI -Approved and Gross FDI



Source: BoT, BoI

We then looked at BOI-approved investment data in detail, comparing their composition between two periods, 1998-2000 and 2001, to the first eight months of 2004. Details are shown below.

Table 5: BoI-Promoted Certificates Issued by Sector

|                          | Number of Projects |              | Total Investment (Bt bn) |              |
|--------------------------|--------------------|--------------|--------------------------|--------------|
|                          | 1998-00            | 2001-4       | 1998-00                  | 2001-4       |
| Agricultural Products    | 280                | 537          | 57.2                     | 119.1        |
| Minerals & Ceramics      | 36                 | 61           | 23.3                     | 24           |
| Light Industry           | 330                | 266          | 46.3                     | 47.4         |
| Metal Processing         | 334                | 683          | 45.7                     | 169.4        |
| Electronics & Electrical | 447                | 559          | 166.4                    | 192.4        |
| Chemical Plastic Paper   | 274                | 362          | 153.3                    | 158.9        |
| Service & Infrastructure | 271                | 464          | 199.3                    | 176.5        |
| <b>Total</b>             | <b>1,972</b>       | <b>2,932</b> | <b>691.3</b>             | <b>887.7</b> |

Source: BoI

We note the following points:

- The total value of BOI-approved investment averaging Bt240bn per year during 2001-2004 is only slightly higher than the Bt230 annual average of 1998-2000. This amounts to about 20% of annual private investment.

- Major sectorial shifts are occurring nonetheless. Thus, investment in agricultural products as a percent of total investment has risen substantially from 8.3% to 13.4%, reflecting Thailand's comparative advantage in this sector.

- The biggest investment sector is still electronics at 21.7%, but this is smaller than the 24.1% portion recorded for 1998-2001.

- On the other hand, the biggest gains have come from the metal processing sector whose share of investment has risen from 6.6% to 19.1%. This is a reflection of recent restructuring in the sector as well as the ongoing boom in construction.

- Interestingly, the share of investment in chemical, plastic and paper has fallen from 28.8% to 19.9%. Given the recent strong cyclical uptrend in these sectors, it appears likely that investment in these sectors is bound to revive again in the coming years. The same argument can be made for the service and infrastructure sector, which has seen its share of total BOI-approved investment dwindle from 28.8% to 19.9%.

#### **Conclusions on Thailand's Investment Picture**

Our conclusions are as follows:

- Nominal investment which accounts for 26% of GDP is expected to grow at an annual rate of 15-16% (versus 8-9% for nominal GDP), qualifying it as THE engine of growth over the next 4-5 years.

- Surprisingly, over half of investments are being undertaken by 1.7mn SMEs. These very small-scale investments are likely to lack resilience, and can therefore be quite volatile. SMEs are likely to be sensitive to interest rates and domestic demand conditions.

- State enterprise investments are likely to be large-scale and are expected to grow the fastest. We suspect they will have high import content, even though government estimates see this to be only 25%.

- FDI is the preferred means of financing Thailand's investment drive since it does away with foreign borrowing and brings with it foreign expertise. Data suggest, however, that the amount of net FDI flowing into Thailand would be modest at about 1-2% of GDP or US\$2-4bn per year.

- BOI data suggest that foreign investment and joint ventures are likely to remain modest at about 20% of total private investment. We found that there are fewer investments in electronics but more in metal processing and agriculture. We also believe that more investments will be allocated to the chemicals, plastics, paper and services sector as well as for infrastructure.

## **5. External Balance Implications**

### **Investment and Imports**

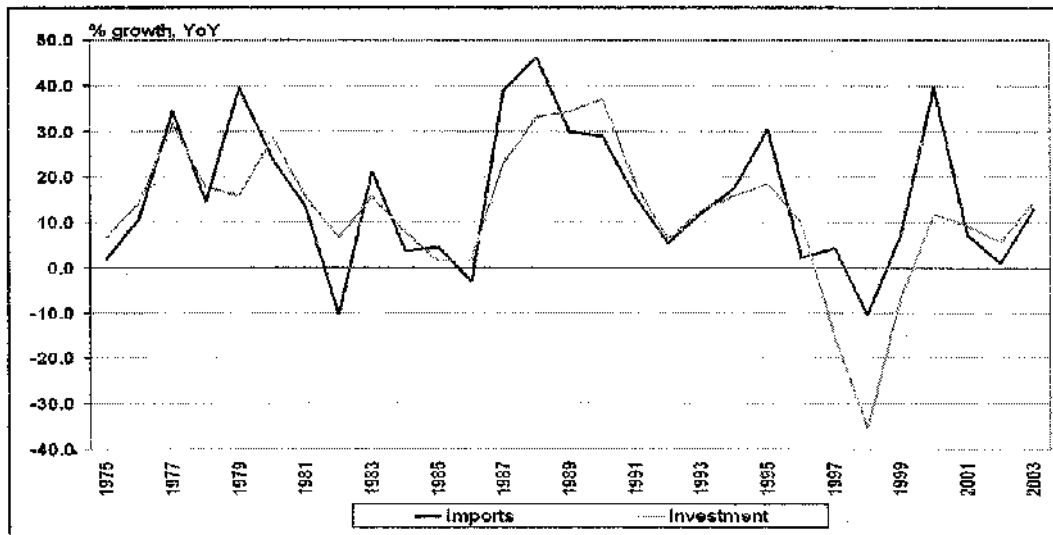
Even though excess domestic savings is plentiful, a major investment drive will cause the current account to deteriorate. This is because investment implies an increase in capital goods imports. As seen in the chart below, during the past 30 years, the correlation between investment growth and import growth is high at 73%. Chart

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13 also suggests a one-to-one relationship, that is, if Thailand's investment grows by 20% per year, then imports will likely grow at the same rate (20%).

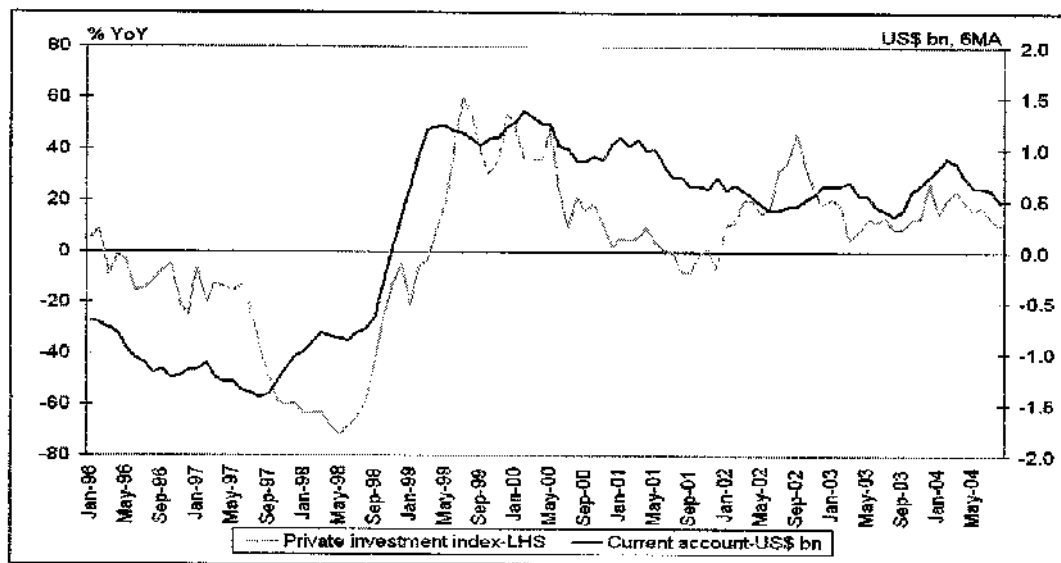
**Chart 13: Imports and Investment Growth**



Source: BoT, NESDB

We would note further that a close correlation also exists in the short term between the composite private investment index (available monthly) and movements in the current account, as seen in the chart below.

Chart 14: Private Investment Index and Current Account



Source: BoT, NESDB

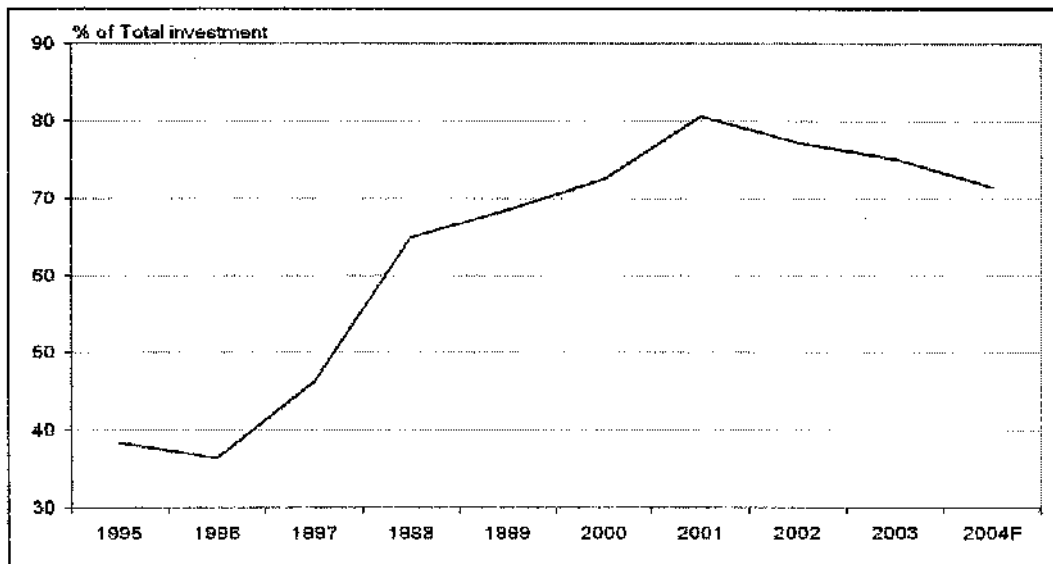
As the rise in investment causes imports to rise, the current account would necessarily deteriorate, all else being the same. This can put pressure on the baht, reduce domestic liquidity and raise interest rates. This means the positive effect of investment on GDP expansion can be tempered by rising imports.

As mentioned earlier, the government estimates that the investment projects outlined above have an average import content of 25%. This is possible but does appear to be an optimistic assessment. First, the projects are all large and sophisticated and therefore likely to demand capital intensity (e.g., power plants, airplanes and trains). Second, the one-to-one relationship in the past that we mentioned above makes us believe that imports would rise more or less at the same rate as investment.

To be precise, we decided to look in detail at capital goods imports trends. The figures we used subtract integrated circuits from

official figures that include them as capital goods but are primarily assembled for reexport. Our adjusted capital goods imports show that, in the past, these imports accounted for 40-80% of total private investment (chart 15). In the post-crisis period (1998 onwards), the percentage is above 60%. For these reasons, we find that the 25% import content estimated by the government is optimistic. With effort, we believe that 50% may be achievable.

**Chart 15: Capital Goods Imports to Total Investment**



Source: BoT, NESDB

### **The Importance of Exports**

Therefore, logic dictates that exports will play a central role in determining the success of Thailand's investment-led growth strategy. Since a significant portion of investment is imported, strong export growth will go a long way towards mitigating the deterioration in the trade account, thereby limiting the rise in interest rates and weakness

in the local currency. Secondly, exports are itself an important "demand" component and would directly raise GDP. Strong exports would add to corporate confidence and their investment appetite.

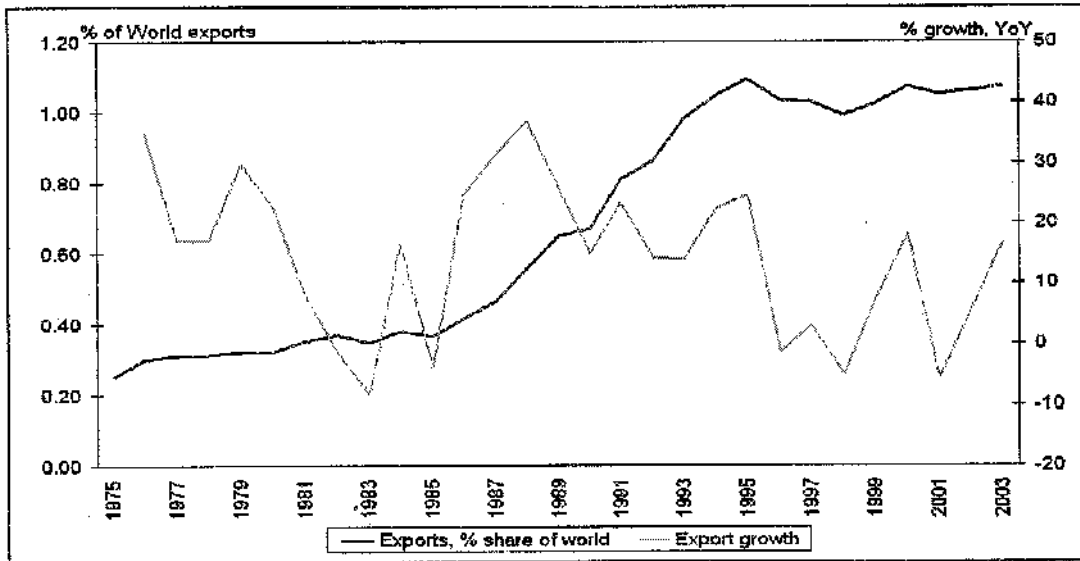
Thailand's export growth has been commendable during the past several years. Year-to-date, exports have risen 23%. Yet, as the following chart illustrates, export growth has in general been erratic. It can be as high as 35% or can contract depending on the global economic cycle. To the extent that we are expecting global growth to slow, export growth forecasts have accordingly been revised down for 2005.

We could argue that because of government policies to promote efficiency, Thai exports will continue to gain international competitiveness. If so, growth of Thai exports will be maintained even if there is a global slowdown; that is, we are seeing a secular rise in Thai exports.

Unfortunately, the chart below shows that Thai exports as a portion of world exports have remained unchanged during the past 10 years. The sharp rise in Thailand's share of world exports during the latter part of the 1980s was the result of a boom in foreign direct investment (FDI) (mainly, Japanese). However, FDI has so far been muted and it appears that Thailand's share of world exports has remained stable since 1993.

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Chart 16: Thailand Exports to the World



Source: BoT, NESDB

This inability to gain world market share is surprising, given Thailand's 40% devaluation in 1997. We can only reason that this was due to the fact that many Asian currencies also depreciated during the Asian economic crisis in 1997. Those that did not, e.g. Hong Kong, also deflated domestic prices, which is another way of cheapening the currency. The most important reason is likely to be China. Most Asian countries, Thailand included, have simply become instead suppliers of inputs and semi-finished goods to China which has become the assembly factory of the world. As such, we have all been growing our exports at more or less the same rate.

All in all, we need to conclude that the reason for the recent strength in Thai exports has more to do with cyclical rather than structural factors. To the extent that Asian exports as a whole are expected to weaken in the face of a pending global slowdown, we forecast Thai exports to grow by about 8-10% in 2005, half the rate of 2004.

**Thailand's Exports: Strengths and Weaknesses**

If in general exports have not become more competitive, then the question is how competitiveness has changed in terms of products. For this, it would be possible to simply compare the share of Thailand's top 10 exports to total exports. As seen below, we could observe the following:

- By far, the sector that was able to best take advantage of the baht devaluation in 1997 is the automobile sector. The share of exports of this sector has quadrupled from 1.4% to 5.6%. This sector now ranks as Thailand's second biggest export.

- Another up-and-coming sector is petrochemicals, where exports of ethylene and propylene have risen from 0.7% to 3.1% of total exports. Iron and steel exports have also increased as their share of total exports nearly doubled from 1.3% to 2.5%.

- Integrated circuits and computer parts together remain Thailand's most important export, accounting for 14% of total exports. Gone, however, are the 20-30% annual growth rates experienced during the early 1990s.

- The garment sector continues its deep decline, notwithstanding the baht's 40% devaluation since 1997. Its share of total exports fell by more than half from 7.3% to 3.2%. To a lesser extent, the share of rice and jewellery also fell.

- The share of agriculture to total exports continues to fall and is now less than 10% of total exports. Also, labor-intensive sectors have lost out to more capital-intensive manufactures.

Since Thailand's top 10 exports account for a sizeable 41% of total exports, the degree of product concentration is significant. That is,

Thailand's overall export performance will depend on the performance of these products in a material way.

**Table 8: Thailand Top 10 Exports**

| <b>% of Total Exports</b>  | <b>1994-6</b> | <b>2002-3</b> | <b>Jan-Aug 04</b> |
|--|---------------|---------------|-------------------|
| Automatic data processing machines and parts thereof             | 9.9           | 10.6          | 9.1               |
| Motor cars, parts and accessories                                | 1.4           | 4.6           | 5.6               |
| Electronic integrated circuits                                   | 4.1           | 5.3           | 5.3               |
| Rubber   | 4.2           | 3.0           | 3.6               |
| Radio-broadcast receivers, television receiver and parts thereof | 2.5           | 3.1           | 3.4               |
| Garments   | 7.3           | 3.7           | 3.2               |
| Polymers of ethylene, propylene, etc in primary forms            | 0.7           | 2.6           | 3.1               |
| Rice   | 3.5           | 2.3           | 2.7               |
| Precious stones and jewelry                                      | 3.2           | 3.2           | 2.7               |
| Iron and steel and their products                                | 1.3           | 2.0           | 2.5               |
| <b>Top 10 Exports</b>  | <b>38.0</b>   | <b>40.4</b>   | <b>41.0</b>       |
| Others   | 62.0          | 59.6          | 59.0              |
| Total  | 100.0         | 100.0         | 100.0             |
| <b>Share of agriculture to total exports</b>                     | <b>11.6</b>   | <b>7.9</b>    | <b>8.3</b>        |

Source: MoC

What about export markets? Thailand has diversified its export market away from developed countries to developing Asian countries. As seen below, export share to the US, EU and Japan combined fell from 51.4% in 1994-96, to 44.4% during Jan-Aug 2004. The rise in market share, not surprisingly, was most pronounced for China where the share rose from 2.8% to 7.0% during the same periods. However, the share of ASEAN markets also rose by a moderate amount. In sum, the share of exports to China and ASEAN has risen from 21.3% to 28.9%.

**Table 7: Thailand Export Market**

| % of Total Exports | Proportion of Total During the Period |              |              |
|--------------------|---------------------------------------|--------------|--------------|
|                    | 1994-96                               | 2002-3       | Jan-Aug 04   |
| US                 | 18.9                                  | 18.3         | 15.8         |
| EU                 | 15.6                                  | 14.8         | 14.6         |
| Japan              | 16.9                                  | 14.3         | 14.0         |
| China              | 2.8                                   | 6.1          | 7.0          |
| ASEAN              | 18.5                                  | 20.2         | 21.9         |
| Others             | 27.4                                  | 26.3         | 26.7         |
| <b>Total</b>       | <b>100.0</b>                          | <b>100.0</b> | <b>100.0</b> |

Source: BoT

Finally, we briefly look at where Thailand currently sells its top exports and observe the following:

- Electronics and automobiles and parts appear to be well diversified among Thailand's major markets.
- Garments are highly dependent on the US market and are therefore vulnerable to competition from China after the expiration of the Multifiber Arrangement in 2005.
- Television and parts are highly dependent on the US and Japanese markets.
- China is Thailand's major customer for petrochemicals and rubber. Japan is also an important buyer of rubber.

**Table 8: Thailand Top 10 Exports to Major Trading Partners (Jan-Aug 04)**

|  |                 |                 |                |
|--|-----------------|-----------------|----------------|
| Automatic data processing machines and parts thereof             | US (18.3%)      | Singapore (17%) | China (14.7%)  |
| Motor cars, parts and accessories                                | Australia (14%) | Indonesia (11%) | Japan (10%)    |
| Electronic integrated circuits                                   | Japan (13%)     | Taiwan (12%)    | US (12%)       |
| Rubber   | China (23%)     | Japan (18%)     | Malaysia (15%) |
| Radio-broadcast receivers, television receiver and parts thereof | US (35%)        | Japan (16%)     | UK (6%)        |
| Garments   | US (52%)        | UK (6.5%)       | Japan (6%)     |
| Polymers of ethylene, propylene, etc in primary forms            | HK (24%)        | China (18%)     | Malaysia (7%)  |
| Rice   | China (8%)      | S.Africa (7.5%) | Iraq (6.5%)    |
| Precious stones and jewelry                                      | US (27%)        | Israel (14%)    | Belgium (11%)  |
| Iron and steel and their products                                | US (12%)        | Japan (9.6%)    | Malaysia (9%)  |

Source: MoC