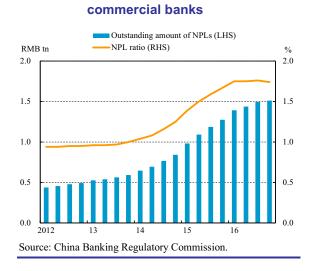
Chart 2.20 NPL ratios of Mainland China's

launched a debt-for-equity program in October 2016 in an effort to relieve the corporate debt burden and reduce banks' outstanding amount of NPLs.

With local government debts coming due, various measures were successively launched

Because of increasing pressure to service their debts²⁵ amid ongoing economic slowdown, Mainland China's government approved to launch a RMB3.2 trillion local government



debt-swap program in 2015 to address the sources of financial stability pressure. Furthermore, Mainland China's government expanded the local government debt-swap program by RMB4.9 trillion in 2016 to enable local governments to tackle their debt due problems. Meanwhile, the State Council decided to adopt a local government debt ceiling in order to reduce default risk of local government debts.

2.2 Domestic macro environment

2.2.1 Domestic economic and fiscal conditions

In 2016, thanks to a gradual recovery in exports and modest growth in investment, domestic economic growth momentum strengthened and inflation remained stable. Short-term external debt servicing ability remained strong on the back of a sustained surplus in the balance of payments and ample foreign exchange reserves. Although the scale of external debt slightly increased, overall external debt servicing capacity stayed robust. Moreover, the government's fiscal deficits rebounded and the total government debt level slightly mounted; nevertheless, the government continued implementing the *Fiscal Health Plan* to enhance a sound fiscal system.

Export growth improved and the domestic economy rebounded progressively

With the moderate global economic recovery and increasing demand for semiconductors, Taiwan's export growth improved significantly in 2016. The decrease in the annual export growth rate sharply recovered to -1.76% from -10.86% a year earlier, in line with the drop in

²⁵ The National Audit Office of the People's Republic of China published the audit findings of public debts at all levels of government in December 2013. Based on the report, about RMB1.52 trillion of the total local government debts fell due in 2016, and about RMB1.08 trillion will fall due in 2017.

exports to Mainland China (including Hong Kong) narrowing from -12.44% recorded a year earlier to -0.23% (Chart 2.21). The gradual recovery in exports and modest growth in both investment and private consumption underpinned the positive economic growth rate which increased continuously from Q2 2016 and even reached 2.79% in Q4. Overall, the annual economic growth rate stood at 1.48%, higher than the 0.72% of the previous year (Chart 2.22).

Taking a glance into 2017, the growth of the global economy and international trade is expected to boost exports. Moreover, the government has adopted an expansionary fiscal policy and is carrying out the *Forward-looking Infrastructure Development Program* to elevate investment momentum. Furthermore, private consumption is experiencing mild growth. As a result, the DGBAS forecasts Taiwan's annual economic growth rate to increase to 2.05%²⁶ in 2017 (Chart 2.22).

Chart 2.21 Growth rates of exports

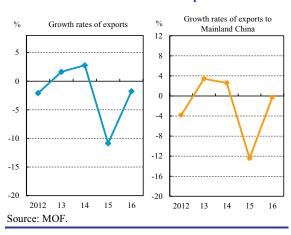
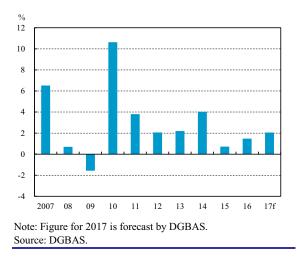


Chart 2.22 Economic growth rates in Taiwan



Domestic prices rose mildly

In 2016, pushed up by the gradual increase in the international prices of raw materials, such as crude oil, the pace of the decrease in the wholesale price index (WPI) inflation rate gradually abated and the annual WPI inflation rate registered 1.79% in December (Chart 2.23). Moreover, the annual WPI inflation rate stood at -2.99% in 2016, higher than the -8.84% recorded in 2015. The DGBAS projects the annual WPI inflation rate to climb successively to 0.50% in 2017.²⁷

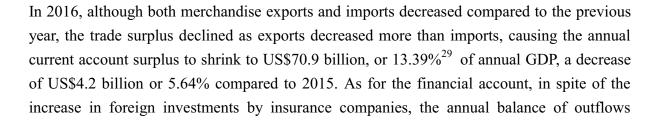
²⁶ See Note 4.

²⁷ See Note 4.

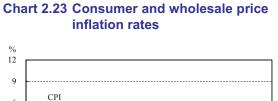
Attributed to severe coldness and the Lunar New Year holidays in early 2016, the CPI inflation rate rose to a peak of 2.41% in February. In subsequent months, the CPI inflation rate reversed to a downtrend. However, affected by the ascending prices of crude oil and the lagged effect of typhoons and torrential rain, the CPI inflation rate rebounded from October and rose to 1.69% in December. Overall, the annual CPI inflation rate registered 1.40% in 2016, higher than the -0.31% of the previous year, while the core CPI inflation rate rose moderately and reached 0.84%, slightly higher than the 0.79% recorded in 2015 (Chart 2.23).

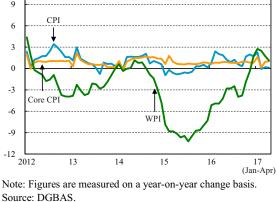
In 2017, although the international prices of raw materials are showing an upward trend, the inflation rate is expected to rise mildly owing to recent NT dollar appreciation easing imported inflation pressure, moderate domestic demand and a negative output gap. The CBC forecasts the annual CPI inflation rate and the core CPI inflation rate to stand at 1.25% and 1.06%,²⁸ respectively.

Current account surplus persisted and foreign exchange reserves stayed abundant

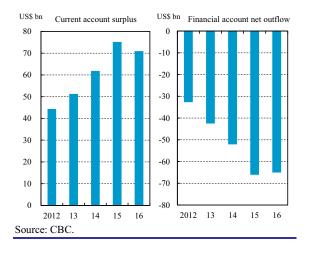


²⁸ See Note 5.









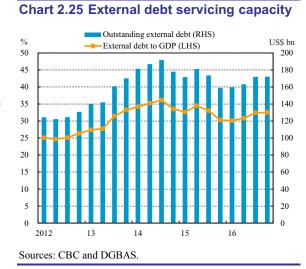
²⁹ For the ratio of current account deficit to GDP, the cutoff point for risk is 3%. A country in which the reading is greater than 3% and has risen by at least 5 percentage points from the previous year is considered to be at relatively high risk.

slightly shrank to US\$65.0 billion as the outflows were partially offset by increases of inflows in both non-resident deposits and short-term foreign loans (Chart 2.24). With a greater decrease in the current account surplus, the balance of payments surplus shrank to US\$10.7 billion in 2016, decreasing by 28.97% from the previous year.

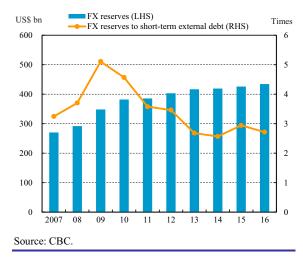
With the accumulation of earnings from portfolio investment of foreign exchange reserve assets, the foreign exchange reserves climbed to US\$434.2 billion at the end of 2016, a slight increase of 1.92% from a year earlier. At the end of April 2017, the amount of foreign exchange reserves continued to increase to US\$438.4 billion.

Scale of external debt expanded slightly, while debt-servicing capacity remained strong

Owing to the increase in the short-term external debt of the banking sector, Taiwan's external debt³⁰ showed an upward trend in the first three quarters of 2016, but slowed







down in Q4. As a result, external debt registered US\$172.2 billion, or 32.50% of annual GDP, at the end of the year (Chart 2.25).³¹ Taiwan's capacity to service external debt remained robust, although the scale of external debt expanded slightly.

Furthermore, at the end of 2016, the ratio of foreign exchange reserves to short-term external debt fell to 2.71 times owing to a greater rise in short-term external debt. Nevertheless, it was

³⁰ The CBC defines external debt as the combined amount owed to foreign parties by Taiwan's public and private sectors, including long-term debt with a maturity of greater than one year and short-term debt with a maturity of one year or less. The term "public external debt" refers to debt that the public sector is either obligated to repay directly or has guaranteed (starting from December 2004, figures for public external debt include outstanding foreign debt arising from repo transactions between the CBC and international financial institutions). The term "private external debt" refers to private-sector foreign debt not guaranteed by the public sector.

³¹ The general international consensus is that a country with a ratio of external debt to GDP lower than 50% is deemed to be relatively low risk.

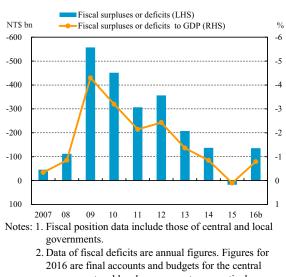
Chart 2.27 Fiscal deficits position

higher than internationally recognized minimum levels,³² implying that Taiwan's foreign exchange reserves have a robust capacity to meet payment obligations (Chart 2.26).

Fiscal deficits rebounded and government debt slightly rose

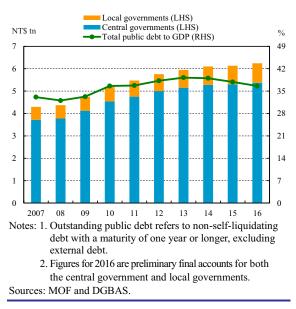
Since the government implemented the *Fiscal Health Plan* from 2014 and the annual revenues in 2015 were higher than expected, fiscal revenues and expenditures had improved significantly. In 2016, the government appropriately increased annual expenditures in response to economic conditions, causing fiscal deficits to rebound to NT\$135.7 billion, or $0.79\%^{33}$ of annual GDP (Chart 2.27).

As fiscal deficits remained a concern and both central and local governments relied on debt issuance to finance debt servicing expenditures, outstanding public debt at all levels of government³⁴ in 2016 slightly expanded to NT\$6.24 trillion³⁵ from the NT\$6.13 trillion registered in the previous year. However, the ratio of total public debt to annual GDP slightly fell to 36.46%³⁶ on account of a higher increase in GDP growth (Chart 2.28).



government and local governments, respectively. Sources: MOF and DGBAS.

Chart 2.28 Public debts



³² The general international consensus is that a country with a ratio of foreign exchange reserves to short-term external debt higher than 100% is deemed to be relatively low risk.

³³ See Note 6.

³⁴ The term "outstanding debt at all levels of government" as used in this report refers to outstanding non-self-liquidating debt with a maturity of one year or longer.

³⁵ At the end of 2016, outstanding non-self-liquidating debt at all levels of government with a maturity of one year or longer was NT\$6.24 trillion, including NT\$5.37 trillion and NT\$0.87 trillion for central government and local governments, respectively, which are both preliminary final accounts. As of April 2017, the outstanding one-year-or-longer non-self-liquidating public debt is NT\$6.20 trillion, including NT\$5.44 trillion, NT\$0.60 trillion, NT\$0.16 trillion, and NT\$0.4 billion for central government, municipalities, counties, and townships, respectively. The figures account for 32.63%, 3.63%, 0.94%, and 0.003% of the average GDP for the preceding three fiscal years, which are below the ceilings of 40.6%, 7.65%, 1.63%, and 0.12% for central government, municipalities, counties, and townships, separately, set out in the Public Debt Act.

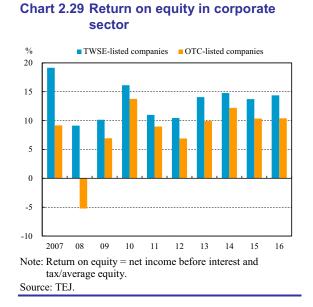
³⁶ See Note 7.

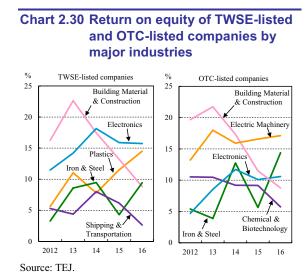
In order to achieve a sound fiscal system, the Ministry of Finance continued to implement the *Fiscal Health Plan* and *Central Government Debt Improvement Plan*, seeking to improve the structures of revenue and expenditure of government and control the scale of debt.

2.2.2 Corporate sector³⁷

The profitability of listed companies enhanced in 2016. However, their financial leverage ratio rose and short-term debt servicing capacity dropped, yet remained at an adequate level. At the end of 2016, the NPL ratio for corporate loans granted bv financial institutions reached a historical low, indicating sound credit quality of corporate loans. Nevertheless, it is notable that the deceleration in corporate investment growth could affect the long-term development of domestic industries.

Profitability of listed companies enhanced in 2016





In 2016, benefiting from the rebound in

international prices of raw materials and the gradual recovery of exports in Taiwan, the average ROEs of TWSE-listed and OTC-listed companies slightly rose to 14.38% and 10.39%, respectively, marginally higher than a year earlier (Chart 2.29). Profitability enhanced, mainly driven by the improvement in market demand boosting profitability in the plastics and the iron & steel industries.

³⁷ Corporate sector only includes the non-financial industrial data of TWSE-listed companies and OTC-listed companies. Throughout this section, figures for listed companies are consolidated financial data; prior to 2011 are under ROC GAAP, while from 2012 are under the TIFRSs. In light of changes in accounting treatment and presentation, readers should interpret these figures prudently when comparing statistics before and after IFRSs adoption.

Except for the building material & construction and the shipping & transportation industries with declining ROEs and the electronics industry with flat ROE, all other industries for TWSE-listed companies reported increasing ROEs in 2016, especially the iron & steel industry. For OTC-listed companies, except for the chemical & biotechnology and the building material & construction industries, all other major industries had better performance (Chart 2.30).

Leverage ratio rose for listed companies

At the end of 2016, the average leverage ratio for TWSE-listed companies rose to 98.33% from 94.29% at the end of the previous year. Similarly, the average leverage ratio for OTC-listed companies also increased to 82.52% from 76.26% a year earlier (Chart 2.31). Leverage ratios rose mainly because listed companies increased borrowing from banks and raised funds through commercial paper in response to the demand for operations.

Short-term debt servicing capacity for listed companies dropped, yet held at an adequate level

Owing to a greater increase in current liabilities, the current ratio for TWSE-listed companies dropped to 155% at the end of 2016, while the interest coverage ratio

Chart 2.31 Leverage ratios in corporate sector

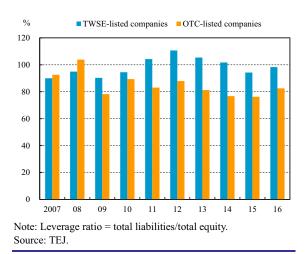


Chart 2.32 Current ratios in corporate sector

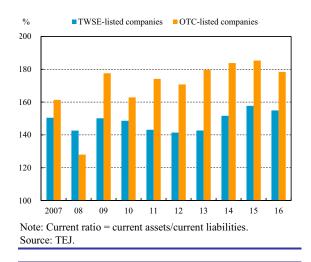
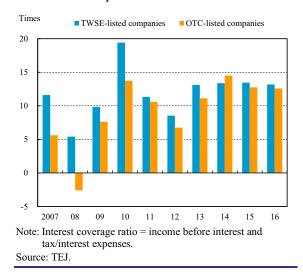


Chart 2.33 Interest coverage ratios in corporate sector



slightly decreased to 13.18. In addition, the current ratio and the interest coverage ratio for OTC-listed companies also fell to 178% and 12.59, respectively (Chart 2.32 and 2.33). For listed companies as a whole, short-term debt servicing capacity generally dropped, yet still held at an adequate level.

Credit quality of corporate³⁸ loans remained sound

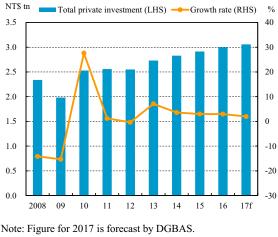
In the first three quarters of 2016, the NPL ratio for corporate loans from financial institutions rose because of an increase in past-due loans of some corporations. However, the ratio turned to decline to only 0.32% at the end of the year and continued to reach the lowest level on record as a result of partial recoveries of bad debts and write-offs of NPLs by financial institutions, reflecting sound credit quality for the corporate sector (Chart 2.34).

Paying close attention to the deceleration in corporate investment growth

Benefiting from the development of advanced manufacturing in the semiconductor industry and the expansion of aircraft fleets in the aviation industry, the growth rate of domestic private real investment was 2.95% in 2016, still slightly lower than that of the previous year (Chart 2.35). In view of the increasing pressure of

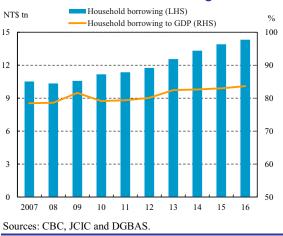






Source: DGBAS.





³⁸ The data for the corporate sector herein are on the basis of listed and unlisted corporations provided by the JCIC.

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Chart 2.34 NPL ratios of corporate loans

international competition among peers, the rise of trade protectionism, and the crowding-out effect by industrial supply chain localization in Mainland China affecting the corporate sector's future operation and investment, the DGBAS predicts the growth rate of domestic private real investment to fall to 1.95% for 2017. It is noteworthy for banks to pay close attention to the impact of moderating corporate investment growth on their long-term operation and development.

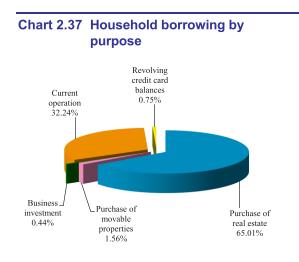
2.2.3 Household sector

The household debt burden relieved slightly as the balance of total household borrowing expanded more slowly than that of disposable income. The overall credit quality of household borrowing remained satisfactory. Meanwhile, the unemployment rate and interest rates on loans remained low, which should help underpin the debt servicing capacity of households.

Household borrowing increased continually

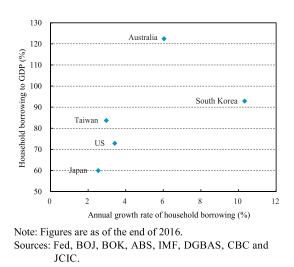
At the end of 2016, total household borrowing saw a slight expansion and reached NT\$14.32 trillion, equivalent to 83.65% of annual GDP (Chart 2.36). The largest share of household borrowing went for the purchase of real estate (65.01%), followed by current operation loans³⁹ (32.24%). The rest of the household borrowing categories took only minor percentages, including loans to purchase movable properties, largely consisting of vehicle loans, business investment loans, and revolving balances on credit cards (Chart 2.37).

In 2016, total household borrowing grew



Note: Figures are as of the end of 2016. Sources: CBC and JCIC.





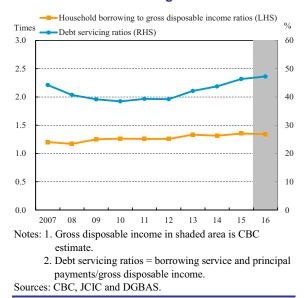
³⁹ The term "current operation loans" includes outstanding cash card loans.

moderately, with the annual growth rate falling to 2.97% at the end of the year. The increment of total household borrowing was mainly from an increase in loans for the purchase of real estate and current operation loans. Compared to other countries, the growth of total household borrowing in Taiwan was lower than that in South Korea and Australia, equivalent to that in the US, but higher than that in Japan. In addition, as a percentage of GDP, household borrowing in Taiwan was lower than that in Australia and South Korea, but higher than that in the US and Japan (Chart 2.38).

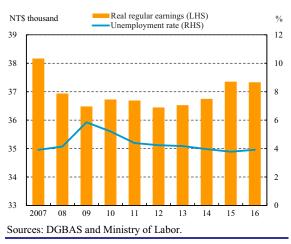
Household debt burden relieved slightly

As total household borrowing grew at a slower pace than disposable income in 2016, the ratio of household borrowing to total disposable income⁴⁰ declined marginally to 1.34 at the end of the year from 1.35 a year earlier, reflecting slight relief of the household debt burden. However, owing to the increase in loans for current operations, which typically have a shorter term, the debt servicing ratio

Chart 2.39 Household indebtedness and debt servicing ratios







uplifted to 47.27% in 2016 (Chart 2.39), thereby indicating that household short-term debt servicing pressure mounted slightly. Although regular earnings of employees in the industrial and service sectors failed to grow in 2016, the domestic unemployment rate (Chart 2.40) and interest rates on loans stayed low, which could help sustain the debt servicing capacity of households.

⁴⁰ Total disposable income = disposable income + rental expenses + interest expenses.

Credit quality of household borrowing remained satisfactory

In 2016, the NPL ratio of household borrowing grew slightly but remained at a low level of 0.25% at the end of the year, reflecting satisfactory credit quality (Chart 2.41).

2.2.4 Real estate market

In 2016, trading volume in the real estate market continuously contracted and house prices declined gradually owing to a downturn in the housing market along with a heavier tax burden on real estate owners. In addition, housing loans and construction loans grew slowly, and mortgage interest rates continued at low levels. With the government's measures aimed at encouraging sound development of the real estate market gradually coming into effect as well as banks improving their risk control of real estate loans, the CBC repealed most of the rules

imposed on housing loans and land collateralized loans, except for high-value housing loans, in late March 2016. From early 2017 onwards, transactions in the housing market showed signs of stabilization.

Trading volume in the real estate market stabilized after contracting dramatically

In 2016 Q1, the total number of building ownership transfers for transaction decreased dramatically by 31.97% year on year owing to the levying of a consolidated housing and land income tax, a heavier tax burden on real estate owners, as well as real estate market participants remaining hesitant. Subsequently, affected by improving domestic economic growth, declining housing prices, increasing number of residential property buyers in the housing market, and a rise in the release of new buildings, housing market transactions recovered gradually. In Q2, the extent of the

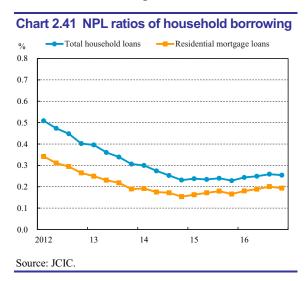
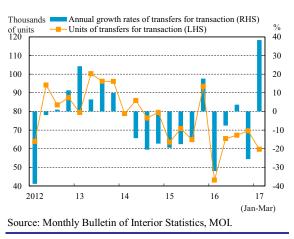


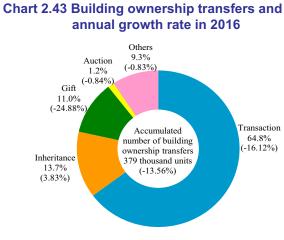
Chart 2.42 Building ownership transfers for transaction



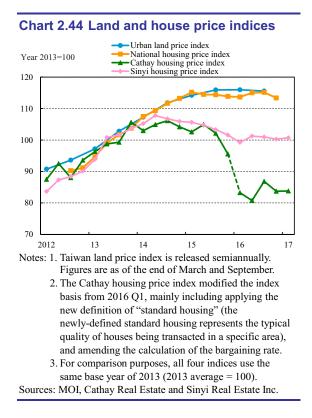
decrease narrowed, and later trading volume in the housing market registered positive growth of 3.63% in Q3. However, the annual growth rate decreased to -25.51% in Q4 as a result of a higher base period in the previous year stemming from dramatically increased transactions before the levying of a consolidated housing and land income tax (Chart 2.42).

The accumulated number building of ownership transfers was 379 thousand units in 2016, declining by 13.56% year on year. The number of building ownership transfers for transaction registered a record low of 245 thousand units, accounting for 64.8% of the total transfers and decreasing by 16.12% year on year. The number of transfers for gift, making up 11.0% of the total transfers, also decreased by 24.88% year on year. These figures show that the government's efforts to curb speculation in the housing market have proved effective (Chart 2.43).

In 2017 Q1, the total number of building ownership transfers for transaction turned to positive growth, with an annual growth rate of 38.3%. The main reasons were a lower base period in 2016 and falling housing prices helping to stabilize the transactions of residential properties.



Source: Monthly Bulletin of Interior Statistics, MOI.



Real estate prices declined slightly

In 2016, dragged by a contracted housing market, land prices also fell gradually. The annual growth rate of the land price index⁴¹ was -0.31% as of the end of September 2016. The

 $^{^{41}}$ The land price index was 118.91 as the Ministry of Interior re-designated March 31, 2013 as the base period (index = 100).

national housing price index reached its highest point in 2015 Q1 and then fell gradually. As of the end of 2016 Q2, the annual growth rate increased slightly to 0.46%, yet declining by $0.16\%^{42}$ from its highest point (Chart 2.44).

The Cathay housing price index⁴³ (for new residential buildings) has fallen slowly since 2015 Q3. The index rallied slightly on the back of an improving housing market from 2016 Q4 onwards (Chart 2.44).

From 2016 onwards, the Sinyi housing price index (for existing residential buildings) continuously declined at a slower pace (Chart 2.44), but the degree of the decline narrowed quarter by quarter. The index

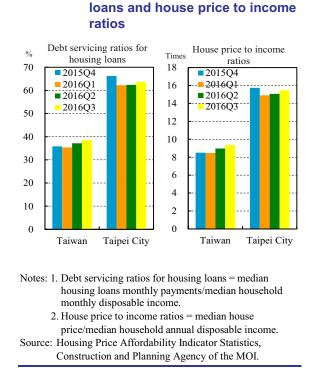


Chart 2.45 Debt servicing ratios for housing

turned to increase by 1.47% in 2017 Q1. However, compared to its highest point in 2014 Q2, the index was still down by 6.56%.

Mortgage burden stayed high

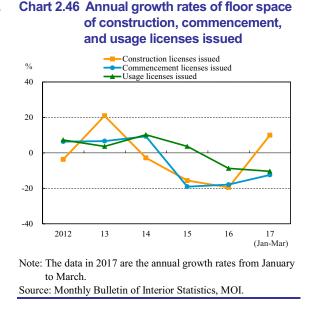
In 2016, housing prices declined gradually and mortgage interest rates showed a downward trend. With the growth of household disposable income continuing to slow, the debt servicing ratio for housing loans increased to 38.49% in 2016 Q3, the highest level since statistics began, increasing by 2.39 percentage points year on year. The house price to income ratio trended up to 9.35, the highest level on record, rising by 0.83 year on year (Chart 2.45). Compared to other cities in Taiwan, the debt servicing ratio for housing loans and the house price to income ratio in Taipei City were the highest, reaching 63.71% and 15.47, respectively, followed by New Taipei City, registering 52.33% and 12.70, respectively.

⁴² See the "Housing price index" report for 2016 Q2, compiled by the Construction and Planning Agency, the Ministry of the Interior.

⁴³ In 2017 Q1, the Cathay housing price index retrospectively adjusted the relevant index, including adjusting the base period, applying the new definition of "standard housing" (the newly-defined standard housing represents the typical quality of houses being transacted in a specific area) from 2016 Q1, and amending the calculation of the bargaining rate.

Construction licenses issued contracted, while unsold new residential properties expanded

In 2016, with sluggish housing market growth, in residential reduction properties а construction projects, as well as enterprises decreasing their demand for launching new stores and expanding plants, the total floor licenses of construction space issued decreased by 19.51% year on year (Chart 2.46), with residential properties decreasing by 27.25%. In 2017 Q1, the annual growth rate of the total floor space of construction licenses issued turned to positive growth of 9.98%, mainly driven by a rise in the demand for expanding offices and plants as well as a lower base period in the previous year;



however, the floor space of construction licenses issued for residential properties still decreased by 5.20%.

Owing to worse-than-expected sales of new construction projects, construction companies were mostly committed to reducing inventory and new buildings constructions. In 2016, the total floor space of commencement licenses issued fell by 17.90% year on year (Chart 2.46), with residential properties decreasing by 19.49%. In 2017 Q1, the total floor space continuously dropped by 12.46% year on year, with residential properties decreasing by 23.77%.

With construction companies reducing construction projects, the total floor space of usage licenses issued decreased by 8.76% year on year in 2016 which was the first negative growth rate since 2011 (Chart 2.46), with residential properties decreasing by 7.04%. In 2017 Q1, the total floor space decreased by 10.38% year on year, with residential properties decreasing by 21.84%.

According to the Ministry of Interior, unsold new residential properties registered 56 thousand units at the end of 2015, increasing by around 17 thousand units or 45.36% year on year. In 2016, 98 thousand usage licenses issued were released, decreasing by 2 thousand units or 1.81% year on year (Chart 2.47). Owing to the prices of new residential properties

Chart 2.47 Unsold new residential

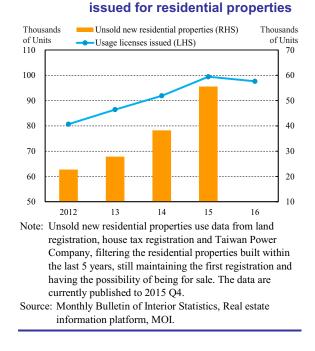
properties and usage licenses

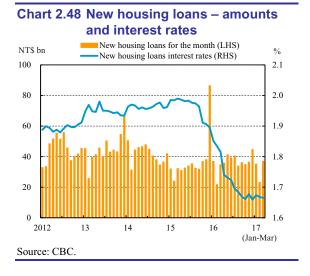
staying high as well as a sluggish housing market, unsold new residential properties will continuously expand.

Real estate loans grew modestly as mortgage interest rates continuously decreased

With demand in the housing market returning to be dominated by self-use housing buyers, the total new housing loans granted by the top five banks⁴⁴ registered NT\$435.7 billion in 2016, decreasing by 2.39% year on year, a narrower decline than the previous year. In January 2017, the figure also decreased by 4.71% year on year but turned to positive growth from February onwards, and registered 6.37% in March. The interest rate for new housing loans exhibited a downward trend, and dropped to 1.659% in December 2016. From 2017 onwards, the housing loan interest rate rebounded slightly, but still stayed at a low level, registering 1.665% in March (Chart 2.48).

From March 2016 onwards, with transactions in the housing market gradually resuming stability, the annual growth rate of the outstanding loans





for house purchases and house refurbishments granted by banks⁴⁵ showed a moderate upward trend, registering 3.78% as of the end of March 2017 (Chart 2.49). Meanwhile, the decrease in outstanding construction loans narrowed gradually since July 2016. Those loans turned to positive growth as of the end of December, registering an annual growth rate of 2.11% at the end of March 2017 (Chart 2.49).

⁴⁴ The top five banks refer to Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank, and Land Bank of Taiwan.

⁴⁵ Refers to domestic banks and the local branches of foreign and Mainland China's banks.

The CBC repealed most targeted prudential measures and banks were urged to exercise self-discipline on real estate loans

As the regulations governing real estate loans have proved effective, the CBC repealed most rules imposed on housing loans and land collateralized loans, except for high-value housing loans, and required financial institutions to strengthen self-discipline on mortgage-related credit risk. As a result, the average loan-to-value ratio for new housing loans rose at a moderate pace from 67.23% in 2016 Q1 to 70.26% in 2017 Q1 (Chart 2.50). In the future,0 the CBC will continue to monitor banks' real estate lending and developments in the housing market, and adopt appropriate measures in a timely manner to sustain financial stability.

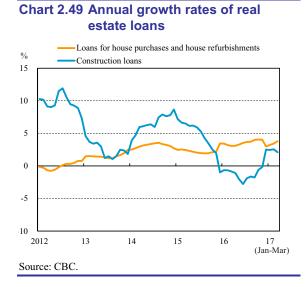
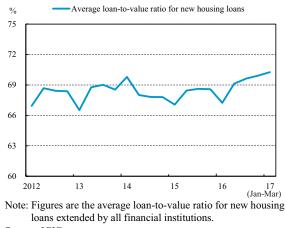


Chart 2.50 Average loan-to-value ratio for new housing loans



Source: JCIC.