

**Macao Special Administrative Region of  
the People's Republic of China: Financial  
Sector Stability Assessment**

## **Macao Special Administrative Region of the People's Republic of China: Financial Sector Stability Assessment**

This financial sector stability assessment on Macao Special Administrative Region of the People's Republic of China was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on July 2009. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Macao or the Executive Board of the IMF.

The policy of publication of staff reports and other documents by the IMF allows for the deletion of market-sensitive information.

Copies of this report are available to the public from

International Monetary Fund • Publication Services  
700 19<sup>th</sup> Street, N.W. • Washington, D.C. 20431  
Telephone: (202) 623-7430 • Telefax: (202) 623-7201  
E-mail: [publications@imf.org](mailto:publications@imf.org) Internet: <http://www.imf.org>

**International Monetary Fund**  
**Washington, D.C.**

INTERNATIONAL MONETARY FUND

MACAO SPECIAL ADMINISTRATIVE REGION OF THE PEOPLE'S REPUBLIC OF CHINA

**ASSESSMENT OF FINANCIAL SECTOR SUPERVISION AND REGULATION**

Prepared by Monetary and Capital Markets Department

Approved by Hervé Ferhani and James Gordon

July 23, 2009

This report is based on the assessment work undertaken during a visit to Macao Special Administrative Region (Macao SAR) between July 15-28, 2008. The assessment is an update of the 2002 assessment, and is based on the Module 2 assessment framework for offshore financial centers (OFC). The team comprised Ms. Jeanne Gobat (head; IMF), Mr. Michael Deasy (banking supervision expert), Mr. Jose Tuya (banking supervision expert), and Mr. Henning Göbel (insurance supervision expert). The key findings were as follows:

- **Banks generally enjoy robust capitalization and adequate profitability.** To date, there has been little direct impact on local banks from the global financial crisis. Most banks did not report significant exposures to the most affected asset classes and remained profitable in 2008. Credit risk poses the main challenge. Pressures on banks' earnings and capital could emerge from a substantial correction in the property market and/or an end or sharp deceleration of the casino boom. Counterparty risk is also high, given that banks place the bulk of their surplus liquidity with parent banks abroad.
- **The financial supervisory framework has strengthened, with several gaps identified in the 2002 assessment addressed.** Overall, the assessment team found there to be a high level of compliance with Basel Core Principles. Further, the disclosure of financial information has been further enhanced, including through participation in the IMF Information Framework Initiative. Going forward, the conduct of supervision will need to evolve from one of compliance towards a more risk focused approach. This would also be in line with the risk focused regulations and guidelines issued recently.
- **Notwithstanding, legal shortcomings in the operational independence of the Monetary Authority of Macao (AMCM) as financial regulator have yet to be addressed.** The AMCM lacks adequate legal independence and final decision making authority over critical supervisory issues.
- **The anti-money laundering and combating the financing of terrorism (AML/CFT) framework of Macao SAR was evaluated against the Financial Action Task Force (FATF) 40+9 Recommendations in December 2006.** While the evaluators found that the overall framework was sound, it lacked the necessary level of detail to comply fully with the standard. Shortcomings, notably in the area of customer due diligence obligations for financial institutions, still needed to be addressed.

The authorities were in broad agreement with the findings of the assessment.

Jeanne Gobat is the main author of this AFSSR with contributions from the rest of the team.

*The AFSSR is a summary report on implementation of the indicated financial sector regulatory standards. It has been developed to help jurisdictions identify and remedy weaknesses in financial sector supervision and regulation. The reviews do not directly assess risks, such as those associated with asset quality, markets, or fraud, which could affect the soundness of financial systems or individual institutions.*

Contents	Page
Glossary .....	<a href="#">3</a>
Executive Summary .....	<a href="#">4</a>
Main Recommendations .....	<a href="#">6</a>
I. Introduction .....	<a href="#">7</a>
II. Background .....	<a href="#">7</a>
A. Macro Setting .....	<a href="#">7</a>
B. Financial Sector Setting .....	<a href="#">10</a>
III. Assessment of the Regulatory and Supervisory Framework .....	<a href="#">16</a>
A. Cross Border Information Exchange and Cooperation .....	<a href="#">18</a>
B. Financial Safety Net .....	<a href="#">19</a>
C. Basel II Implementation .....	<a href="#">21</a>
D. Disclosure of Financial Information and Accounting Issues .....	<a href="#">21</a>
E. Anti-Money Laundering .....	<a href="#">22</a>
Tables	
1. Macao SAR: Selected Economic Indicators .....	<a href="#">9</a>
2. Macao SAR: Structure of the Financial System .....	<a href="#">11</a>
3. Macao SAR: Financial Soundness Indicators .....	<a href="#">14</a>
Figures	
1. Macao SAR: Developments in Banking Soundness Indicators .....	<a href="#">15</a>
Appendices	
I. Status of Implementation of the 2002 Recommendations .....	<a href="#">23</a>
II. Report on the Observance of Standards and Codes (ROSC) for the Basel Core Principles for Effective Banking Supervision .....	<a href="#">25</a>
Appendix tables	
1. Summary Compliance with the Basel Core Principles—ROSCs .....	<a href="#">30</a>
2. Recommended Action Plan to Improve Compliance with the Basel Core Principles .....	<a href="#">31</a>

## GLOSSARY

AFSSR	Assessment of Financial Sector Supervision and Regulation
AMCM	Monetary Authority of Macao
AML/CFT	Anti-money laundering and combating the financing of terrorism
APG	Asia Pacific Group
BOC	Bank of China
BCP	Basel Core Principles
BIS	Bank of International Settlements
CBA	Currency Board Arrangement
CEPA	Closer Economic Partnership Agreement
BSD	Banking Supervision Department
FATF	Financial Action Task Force
FSA	Financial System Act
FX	Foreign Exchange
GDP	Gross Domestic Product
HKSAR	Hong Kong SAR
HHI	Herfindhal Hirshman Index
HK	Hong Kong
HKMA	Hong Kong Monetary Authority
HK\$	Hong Kong Dollar
IAS	International Accounting Standards
ICP	Insurance Core Principles
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
MAS	Monetary Authority of Singapore
ME	Mutual Evaluation
MOP	Pataca
MOUs	Memorandum of Understanding
MSAR	Macao SAR
NPL	Non Performing Loans
OFC	Offshore Financial Center
OGBS	Offshore Group of Banking Supervisors
PCA	Prompt Corrective Action
POC	Province of China
PRC	People's Republic of China
ROSC	Report on the Observance of Standards and Codes
SAR	Special Administrative Region
US\$	U.S. Dollar

## EXECUTIVE SUMMARY

**The financial sector of Macao SAR is large, and bank dominated.** Total financial sector assets amounted to 307 percent of GDP in 2008, with banking assets accounting for 94 percent of the total. Local banking operations benefit from the financial and risk management support of their parent banks and the AMCM takes this into account in its role as host supervisor in addition to collaboration with home regulators.

**Since the 2002 OFC assessment, Macao SAR has made important progress in strengthening the regulatory and supervisory framework governing the financial sector.** The AMCM has addressed a number of gaps identified in the 2002 assessment and stepped up its efforts to implement international bank supervisory guidance, including issuing risk based regulatory and supervisory guidelines, implementing the market risk amendment to the capital framework, enhancing disclosure of financial information, and addressing staffing shortages.

**Notwithstanding, the absence of operational independence of the AMCM in the law undermines the supervisory framework.** The lack of such independence can lead to delaying regulatory action and operational supervisory decisions. The current law also gives the chief executive of Macao SAR final decision making authority over critical banking prudential issues. The same issue applies to insurance supervision, where the legal authority over licensing approval, regulation of tariffs and sanctions rests with the chief executive of Macao SAR.

**The AMCM should be granted independence to empower it to safeguard the soundness and stability of the financial system.** Aligning Macao SAR's supervisory framework with international best practices requires providing operational independence from the government of Macao SAR and the legal authority and final enforcement power over financial regulatory decisions to the AMCM. In addition, this includes spelling out the procedures for appointment and dismissal of AMCM's chairman in the law. The term of the chairman should also be extended to beyond the current two years.

**Going forward, the conduct of supervision will need to evolve from a more compliance approach toward a risk-based supervisory approach.** There should be far greater emphasis on the comprehensive assessment of the risk profile of individual banks and financial systemic risk. As part of this, the AMCM should in its offsite reviews incorporate market analysis of parent banks' financial condition and input from home country supervisors. Resources should be proportionately allocated to those institutions from home countries that pose higher economic and systemic risk or where home supervision or parent company financial support is weak. The offsite analytical process can be enhanced by deepening the analysis of bank-specific trends and undertaking more systemic analysis of the banking sector. Stress testing should be used as a supervisory tool to examine the resilience of the system and individual institutions to specific shocks. Finally, it is recommended that the development of an onsite manual be completed.

**The supervisory framework of the insurance sector needs to be strengthened.** High priority needs to be on prioritizing the supervisory approach. Fewer resources should be devoted to noncore functions such as the management of guaranteed funds and customer complaints and

more on carrying out full scale onsite inspections, which has not been done, and developing an onsite inspections handbook, as recommended in the 2002 OFC assessment. The offsite analysis could also be enhanced through an analytical review of claims performance and trends. Given the importance of foreign branches in the Macao SAR insurance market, the AMCM should arrange Memorandum of Understandings (MOUs) with the insurance regulators in the jurisdictions where no such arrangement exists. Currently, foreign branches accounting for 35 percent of the market are not covered by MOUs.

**While the AMCM has a well defined bank resolution process, consideration should be given to developing a rapid remedial action framework to facilitate an orderly approach to addressing banking problems.** This would include incorporating in the law trigger points for timely intervention and specific actions against a bank when capital levels fall below certain threshold values. The role of the government of Macao SAR in the bank resolution process should be more narrowly restricted to systemic risk discussions to assure that the AMCM has full control over enforcement of the resolution process and can act quickly and efficiently in the face of an emerging banking problem or broader banking crisis.

**Consideration could also be given to introducing an explicit deposit insurance scheme in Macao SAR following the expiration of the blanket customer deposit guarantee scheme.** Prior to October 2008, Macao SAR had no deposit insurance scheme in place. However, following similar measures taken by neighboring jurisdiction, the government of Macao SAR announced that it would provide full protection for customer deposits held with all banks authorized in Macao SAR. These measures are viewed as temporary and will remain in force until the end of 2010 when a review will be taken. In introducing a permanent deposit insurance scheme, care should be given to its design in the law, including with regard to membership, coverage, payout limits, and premium charges.

**The transparency of banks' financial reporting could be further enhanced.** The current account framework should be amended to allow for the full introduction of the remaining International Financial Reporting Standards (IFRS). This would address the problem that there are no guidelines on which accounting standards to use for those not covered by IFRS. The AMCM should also consider posting a range of financial soundness indicators on its website. Finally, the bank returns for supervisory purposes would benefit from greater detail collected on outstanding loans.

**In December 2006, Macao SAR underwent a mutual evaluation (ME) of its AML/CFT regime for compliance with FATF 40+9 Recommendations.** The ME report notes Macao SAR's commitment to enhance its compliance with the 40+9 Recommendations and highlights the issuance, in 2006, of new AML/CFT legal and regulatory measures, as well as AMCM guidelines for financial institutions. It also indicates that the new provisions still need to be strengthened further, notably with respect to customer due diligence obligations. The AML/CFT supervisory and regulatory system of the AMCM is largely in line with the standard, especially with regard to the banking sector.

### KEY RECOMMENDATIONS

Recommendation	Priority
The law should grant operational independence to the AMCM. As part of the legislative reforms, the Chairman's appointment should be confirmed by the Legislative Assembly and the terms of removal should be spelt out and published. The term of appointment should be extended to, say, five years. The AMCM should be able to set its overall budget, without government approval. The AMCM should have the final decision making authority in implementing corrective or remedial action to assure timely and effective bank resolution.	High
To be in compliance with international accepted principles for effective supervision, the Insurance Ordinance and Decree-Laws (the Charter) should be amended to give the AMCM authority over key regulatory and supervisory decision affecting the insurance system, including the licensing approval process, the regulation of tariffs and sanctions.	High
Complete the onsite inspection manual for banking as a matter of urgency.	High
Amend regulations on related parties to include a guideline that exposures to related parties may not be granted on more favorable terms than to non-related parties.	High
The AMCM should enhance its offsite analysis by deepening the trend analysis for individual banks (including the financial condition of the parent) and collate this information into a systemic risk framework for analyzing overall banking vulnerabilities. The Banking Supervision Department should modify its banks returns for credit risk analysis purposes as it would benefit from greater detail collected on outstanding loans.	High
Develop a formal process that underpins the current bank resolution measures in place, including defining possible remedial actions at trigger points. Specify under what conditions liquidity will be provided by the AMCM and the role of the government in the event of possible deposit payout.	Medium
On insurance supervision, carry out full scale onsite inspection and develop an onsite inspection manual. Offsite supervision should incorporate an analysis of claims performance and trends.	High
The AMCM should arrange MOUs with the insurance regulators in the jurisdictions where no such arrangement exists.	High
To enhance the transparency and credibility of its accounting system, Macao SAR should adopt the IFRS system in full.	Medium
Consider the introduction of a deposit insurance scheme following the expiration of the current blanket guarantee on customer deposits in 2010.	Medium

## I. INTRODUCTION

1. **At the invitation of the government of Macao SAR (Special Administrative Region of the People’s Republic of China), an update assessment of the OFC was carried out from July 15–July 28, 2008.** The assessment for Macao SAR was conducted under the OFC program Module 2.<sup>1</sup>

2. **The IMF’s Module 2 assessment of Macao SAR took place at end 2001, with the final report issued in August 2002.**<sup>2</sup> At that time, the mission concluded that the Macao SAR had in place a comprehensive supervisory structure and practices that supported an effective and well regulated financial environment. Staff advised the authorities to further strengthen the supervisory architecture by enhancing the regulatory independence of the AMCM;<sup>3</sup> incorporating market risk into the Basel capital adequacy calculation; issuing guidelines on country and concentration risks; increasing supervisory resources; developing supervision manuals and handbooks for banking and insurance; providing for greater information sharing among regulatory bodies, and strengthening the AML/CFT regime. The main recommendations and the current status of implementation, as reported by the authorities, are summarized in Appendix I.

3. **The assessment focused on developments in the supervisory and regulatory framework since the 2002 Module 2 OFC assessment.** Key tasks included: (i) assessing implementation of the 2002 recommendations; (ii) assessing compliance with the Basel Core Principles for Effective Banking Supervision (BCP) against the revised 2006 principles; (iii) updating the 2002 assessment of the insurance sector based on the principles of the International Association of Insurance Supervisors (IAIS) of insurance supervision and review the performance of the sector.

## II. BACKGROUND

### A. Macro Setting<sup>4</sup>

4. **Macao<sup>5</sup> became a Special Administrative Region of the People’s Republic of China (PRC)<sup>6</sup> at the end of 1999.** The Basic Law provides that Macao SAR preserves its social and economic system for 50 years, within the framework of the Chinese formula for “one country, two systems.”

---

<sup>1</sup> The Board agreed to the integration of the OFC program into the FSAP but permitted a transition period during which all scheduled OFC assessments could be conducted under the OFC Module 2 program (Buff/08/78).

<sup>2</sup> Macao SAR: Assessment of the Regulation and Supervision of the Financial Sector (August 2002).

<sup>3</sup> AMCM is the Portuguese abbreviation of the Monetary Authority of Macau and is widely used. Macao and Macau are used interchangeably.

<sup>4</sup> The last Article IV consultation with Macao was carried out in 1998. As a result, Macao SAR’s macro-economic framework is only periodically reviewed.

<sup>5</sup> Prior to December 20, 1999, the territory, under Portuguese administration, was referred to as Macau.

<sup>6</sup> People’s Republic of China is also referred as the Chinese mainland in this document.

5. **Since 2003, Macao SAR (MSAR)<sup>7</sup> has benefited from a gaming-driven economic boom.** In the course of less than five years, Macao has transformed itself into the top global destination for gaming/casino related activities. It has now more casinos, visitors, and gaming turnover than Las Vegas. Visitor arrivals reached a record high of 27 million in 2007 (compared to a local population of about 500,000), with the Chinese mainland visitors accounting for about half of arrivals. MSAR's per capita GDP, which was about half the level of Hong Kong SAR (HKSAR) in 2001, now at US\$ 36,357 exceeds that of its neighbor city. Real GDP growth averaged about 20 percent over the past five years, supported by a threefold increase in tourism and gaming related spending and revenue and a boom in the construction of hotels, casinos, convention and shopping centers, and residential property developments as well as further reclaiming of land. Foreign capital financed most of this construction and property market boom, with financing mainly coming from HKSAR, the Chinese mainland, and the United States.

6. **Structural reforms and enhanced economic integration with the Chinese mainland have helped trigger this economic boom.** The termination of the 40-year gaming monopoly at the beginning of 2002, as well as the closer economic cooperation with the Chinese mainland since 1999, including the implementation of the Closer Economic Partnership Arrangement (CEPA) between the Chinese mainland and MSAR, have been key to the positive economic developments. MSAR has also benefited from the liberalization of travel policy under the "Individual Traveler Scheme" by the Chinese mainland. The economy, however, has become less diversified over the past decade and it is estimated that gaming/tourism related activity account now for about two thirds of GDP, up from one third a decade earlier. The government has increased its efforts to diversify the economy, including through the promotion of the convention and entertainment industry and addressing bottlenecks in the transportation infrastructure.

7. **Under the currency board arrangement, fiscal policy is the primary tool for countercyclical economic management.** The local currency—the pataca (MOP)—has been pegged to the Hong Kong dollar since 1977 at a middle rate of 1.03 and is 100 percent backed by foreign assets under the currency board arrangement (CBA). With capital freely mobile,<sup>8</sup> monetary conditions in MSAR are strongly influenced by conditions in the HKSAR and the United States market. Fiscal policy has traditionally been conducted in a prudent and conservative manner, visible in fiscal surpluses since 2002 (14 percent of GDP in 2007), no public debt, substantial fiscal reserves (about 50 percent of GDP), and a Moody's Aa3 sovereign rating.<sup>9</sup> The conservative fiscal stance, along with international reserves exceeding patacas M2 (119 percent at end-March 2008), have helped underpin confidence in the currency peg and the financial system.

---

<sup>7</sup> Macao SAR, MSAR, and Macao are used interchangeably.

<sup>8</sup> There are no exchange restrictions on current and capital account transactions.

<sup>9</sup> By comparison, HKSAR has a Aa2 rating. Although similar, Moody notes that Macao SAR's rating is one notch lower than HKSAR because of its dependence on one sector, and hence greater vulnerability to shocks.

8. **While the overall outlook for MSAR is positive, the economy is vulnerable to external shocks owing to its dependence on gaming.** The economy will continue to benefit from the positive prospects of the gaming/tourism industry and for the regional economies, as well as from closer economic regional integration. Owing to its high dependence on gaming related activity, the economy is vulnerable to shocks affecting international travel, the neighboring economies, and policy changes affecting gaming, including those that affect the Chinese mainland's "Individual Traveler Scheme."<sup>10</sup>

**Table 1. Macao SAR: Selected Economic Indicators**  
(In percent)

	2002	2003	2004	2005	2006	2007	2008
<b>Real Sector</b>							
Real GDP growth (annual)	10.1	14.2	27.3	6.9	16.5	25.3	13.2
	(In millions of patacas)						
Gross domestic product	54,819	63,566	82,234	92,191	113,709	149,457	171,867
Gross fixed capital formation	5,801	8,982	13,422	24,768	39,330	54,187	49,474
Fixed Investment (In percent of GDP)	11	14	16	27	35	36	29
Exports (in percent of GDP)	104	103	104	94	89	88	90
Imports (in percent of GDP)	64	61	62	63	64	65	66
GDP in US dollars (In millions)	6,824	7,949	10,267	11,543	14,203	18,603	21,531
<b>Prices and Labor Market</b>							
Inflation (annual)	-2.6	-1.6	1.0	4.4	5.1	5.6	8.6
Property prices (residential, in patacas, annual, MOP per square meter of usable area)	6,261	6,377	7,984	10,024	10,578	13,649	...
Property prices (residential, annual, per square meter of usable area)	...	1.9	25.2	25.6	5.5	29.0	...
Earnings (annual, MOP)	4,672	4,801	5,167	5,773	6,701	7,800	...
Earnings (annual)	0.3	2.8	7.6	11.7	16.1	16.4	...
Unemployment rate	6.3	6.0	4.9	4.1	3.8	3.1	...
Population (In millions; mid-year estimates)	0.45	0.46	0.47	0.47	0.48	0.53	0.55
<b>Money and banking</b>							
Lending rate	6.1	6.0	6.0	7.0	8.8	7.8	...
Deposit rate	0.6	0.3	0.1	1.6	2.8	2.9	...
M2/GDP	180.5	174.8	147.1	147.2	148.5	124.1	110.4
Hong Kong dollar deposits/M2 1/	51.8	53.5	54.7	51.7	53.9	54.7	52.3
Reserve coverage (international reserves/broad money)	30.8	31.3	36.0	39.4	43.3	57.3	67.0
Net foreign assets/GDP	178.7	180.5	158.9	161.8	168.9	144.8	135.7
Private sector credit/GDP	59.0	50.2	42.3	46.4	42.8	46.9	52.3
Private sector credit growth	-7.4	-1.3	9.0	23.0	13.9	44.0	28.2
<b>Balance of payments</b>							
	(In millions of U.S. dollars; end of period)						
Current account, n.i.e.	2,719	3,160	4,240	3,367	2,928	5,863	...
(In percent of GDP)	39.8	39.9	41.4	29.3	20.6	31.5	...
Goods: Exports f.o.b.	2,358	2,585	2,815	2,478	2,560	2,545	...
Goods: Imports f.o.b.	-3,277	-3,678	-4,657	-5,271	-6,496	-7,638	...
Trade balance	-920	-1,093	-1,842	-2,792	-3,936	-5,094	...
Net foreign investment	346	519	848	1707	2131	3511	...
Exchange rate (Patacas per US\$; end of period)	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Moody's sovereign rating	Baa1	A1	A1	A1	A1	Aa3	Aa3

Source: IMF, International Financial Statistics, AMCM and Moody's.  
1/ Includes only resident deposits.

<sup>10</sup> This scheme, which began in mid 2003, allows travelers from the Chinese mainland to visit HKSAR and MSAR on an individual basis.

## B. Financial Sector Setting

### Overview

9. **Macao SAR financial system is large relative to the size of its economy.** Total financial sector assets amounted to MOP 412 billion at September 2008 (about US\$ 51 billion), equivalent to more than 307 percent of GDP. Compared, however, to other financial centers, MSAR's financial sector is of mid-size, with significant cross-border exposure. External assets account for about 60 percent of total financial assets, with most of MSAR's high level of domestic savings channeled abroad. This reflects the small and narrow economic base, the high foreign ownership of the financial system and the close proximity to the HKSAR financial center. Offshore financial activity is relatively small, accounting for 13 percent of banking assets.

10. **The financial system of Macao SAR is mainly bank oriented and foreign owned.** The system includes credit institutions—mostly banks—and noncredit institutions, primarily insurance companies. Banking assets account for more than 94 percent of total financial sector assets:

- **There are 30 credit institutions comprised of 27 commercial banks**, one government-owned postal savings bank, a store value card issuer, and one finance company (nondeposit taking). Of the commercial banks, 11 are locally incorporated and 16 are branches of foreign banks. Three of the commercial banks are offshore banks (two branches and one subsidiary, and all Portuguese owned).
- **There are 26 insurance companies (11 life and 15 nonlife companies; there are no offshore licensed companies).** All but two are branches or subsidiaries of foreign entities. Total net premiums amounted to US\$ 403 million (a 30 percent increase from 2006) against US\$ 1.5 billion of assets at end-2007. The industry is concentrated, with the top four insurance companies (both in life and nonlife) accounting for 85 percent of gross premiums. There are few linkages between banks and insurance companies in Macao SAR, reflecting also the 15 percent limit on banks' ownership of insurance companies.
- **Other noncredit financial institutions include:** 2 securities brokers (branches of HKSAR based companies), 11 bureau de change, 2 cash remittance companies, and 6 exchange counters (operating within casinos). Although permitted by law, there are no trust nor asset management companies active in MSAR.
- **While outside the offshore financial center**, there are 542 nonfinancial companies that are incorporated and operating in MSAR with physical presence. These involve mainly “back office” activities for their HKSAR parents and data processing and advisory services.

**Table 2. Macao SAR: Structure of the Financial System**

(In MOP millions, unless otherwise stated)

	2001	In % of total financial assets	2004	In % of total financial assets	2007	In % of total financial assets	2008 Q3	In % of total financial assets
<b>Financial Sector Assets</b>	146,182	100	179,941	100	347,681	100	411,896	100
In percent of GDP	294		217		229		307	
<b>Deposit-taking financial institutions</b>	142,315	97.4	171,028	95.0	327,763	94.3	389,672	94.6
Banks	142,315	97.4	171,028	95.0	327,749	94.3	389,649	94.6
Private banks	16,457	11.3	23,651	13.1	31,190	9.0	1,796	0.4
State-owned	1,109	0.8	1,055	0.6	1,255	0.4	1,190	0.3
Foreign-majority owned	124,748	85.3	146,322	81.3	295,304	84.9	386,662	93.9
Subsidiaries	60,945	41.7	70,448	39.2	135,619	39.0	166,272	40.4
Branches of foreign banks	63,803	43.6	75,874	42.2	159,686	45.9	220,390	53.5
Deposit-taking specialized financial institutions	0	0	0	0	14	0	23	0
<b>Non-Bank Financial Institutions</b>	3,868	2.6	8,913	5.0	19,918	5.7	22,224	5.4
Finance Companies	54	0.0	65	0.0	77	0.0	79	0.0
Credit Fonciers	0	0.0	0	0.0	0	0.0	0	0.0
Insurance companies	3,814	2.6	6,764	3.8	16,252	4.7	18,036	4.4
Life	2,973	2.0	5,924	3.3	14,449	4.2	15,995	3.9
Nonlife	841	0.6	841	0.5	1,804	0.5	2,041	0.5
Securities dealers (brokers)	n.a.	n.a.	38	0	88	0	65	0.0
Pension Funds	n.a.	n.a.	2,046	1.1	3,501	1.0	4,044	1.0

Source: AMCM

11. **There is no capital market in Macao SAR.** There is only an interbank market, although activity among banks is very low. Banks manage their pataca liquidity mainly through the standing facilities of the AMCM and their foreign currency liquidity through the Hong Kong market. As for securities trades for clients and for financial institutions' own accounts, they are executed on international exchanges via authorized foreign financial counterparts, while banks and investment managers are not allowed to be remote members of overseas stock or derivatives exchanges. There are less than a dozen local nonfinancial companies listed on the HKSAR Stock Exchange.

12. **One unique feature of MSAR's financial system is the wide use of the Hong Kong dollar (HK\$) for transaction and store value purposes.** The HK\$ accounts for about 50 percent of banks' assets (over 60 percent of bank loans) and deposits, and a large portion of currency in circulation. The purchases of goods and services and assets in HK\$ is widespread in MSAR. The use of HK\$ and pataca for gaming purposes is permitted.

### Banking sector

13. **Macao's banking sector is foreign owned, potentially creating supervisory challenges for host-home issues.** The Chinese mainland, Hong Kong and Portuguese ownership dominate the sector. All but two commercial banks (whose combined business

represents less than 1 percent of total banking assets in MSAR) are either subsidiaries or branches of foreign banks. The Chinese mainland owned banks dominate the market, with the Bank of China (BOC, operating on a branch basis) effectively accounting for 40 percent of the market when aggregated with Tai Fung Bank (50.3 percent owned by BOC).<sup>11</sup> Notwithstanding this dominance, the market appears competitive with the Herfindhal Hirshman Index (HHI) valued at 1314.<sup>12</sup> Net interest margins around 1.4 percent are also not out of line with competitive systems.

14. **Offshore banking activities are relatively small.** There are three offshore banks. Their total assets and deposits account for about 13 percent of total banking assets and deposits respectively. These offshore banks operate in Macao mainly because of exemptions from income tax and industrial tax (annual fee for business registration). They may not transact with residents (including the locally incorporated companies and the branches of foreign companies operating in MSAR), and they can only transact in currencies other than the local currency. Other than having a lower capital requirement, the same supervisory regime applies to offshore banks as to all banks.

15. **Banks engage mainly in traditional banking business—taking deposits, granting loans, and managing surplus liquidity.** Banks fund themselves primarily through domestic deposits while branches, if needed, can borrow liquidity from their parent banks. Banks can take deposits from non-residents (mainly retail customers residing in the Chinese mainland or HKSAR, and mainly customers residing in the EU for offshore banks). Non-resident deposits account for about 29 percent of total deposits. At 50 percent, the loan/deposit ratio remains low, reflecting limited lending opportunities, strong deposit growth owing to the favorable economic environment and fiscal surpluses (public sector deposits account for about 4 percent of total banking deposits), and a relatively high liquid asset ratio requirement (30 percent). Apart from investing in AMCM monetary bills, banks place the majority of their excess liquidity with their parent banks and offshore affiliates. Reflecting the liquid condition, interbank deposits with foreign financial institutions account for about 40 percent of banks' assets, with the bulk placed in the HKSAR market. There is very little off-balance sheet activity owing to little demand for hedging by customers. Foreign currencies are mainly transacted for the banks' customers, while banks themselves do little trading on their account. As such, market risk exposure is limited.

---

<sup>11</sup> The BOC and the fourth largest bank, the Banco Nacional Ultramarino (BNU), are among the oldest operating banks in MSAR; the headquarter of BOC and parent of BNU are state-owned; they are the note issuing banks for the government of MSAR and also act as treasury on behalf of the government. To issue notes, the two banks are required to submit HK\$s to the AMCM in return for noninterest-bearing certificates of indebtedness.

<sup>12</sup> The HHI index is calculated for a sample of 28 banks for which market data (based on assets) was available at May 2008. It is the sum of the squares of the market share for all banks. A HHI value between 1000 and 1800 indicates moderate concentration while a value above 1800 would suggest high concentration.

16. **Following years of sluggish growth, loan growth surged over the past two years on the back of the economic and property market boom.** Loans increased by 42 percent in 2007 and 39 percent in 2008, with most directed to the construction and trade sectors and households, including residential mortgages. Banks' exposure to the residential and commercial property market accounts for about 30 percent of total loans (20 percent residential mortgages, the rest construction and public works). It is mainly Hong Kong dollar denominated and at floating rates which help lower banks' exposure to interest rate risks, although this could translate to higher credit risks. Banks' direct loan exposure to the gaming industry is small, given that most of this is financed overseas. Banks also lend to nonresidents, primarily from HKSAR, but otherwise do very little offshore lending.<sup>13</sup> FX exposures generally do not pose a significant risk so long as the currency board arrangement holds and the banks have liabilities and assets in HK\$.s.

17. **Banks are generally profitable and well capitalized.** Banks have experienced an extended period of improved profitability, supported by volume growth, stable net interest margins, growing noninterest income, and improving asset quality. Profits declined in 2008 on the back of slower economic growth. Operating efficiency deteriorated over the past two years due to higher wage growth. Nonperforming loans have remained low at 0.6 percent.<sup>14</sup> Loan loss provisioning (net of collateral) by banks has increased sharply to 65 percent of NPL at end-2008. The rapid loan growth has not yet led to a higher incidence of credit losses. Capital adequacy at about 15 percent is strong, well above the 8 percent regulatory requirement.

18. **To date, there has been little direct impact on the local banking sector from the global financial crisis.** Most banks have no significant exposure to the most affected asset classes. As the majority of banks is flush with liquidity and fund themselves primarily through domestic deposits, there has been no significant impact from the tighter global liquidity and credit conditions.

---

<sup>13</sup> Lending to nonresidents increased sharply in the first quarter of 2008. This reflects a decision by the headquarter of a couple of banks to transfer some of their loans to their branch or subsidiaries in Macao SAR.

<sup>14</sup> Loans include loans and advances to nonbank customers and bank acceptances and trade bills discounted.

**Table 3. Macao SAR: Financial Soundness Indicators**  
(In percent)

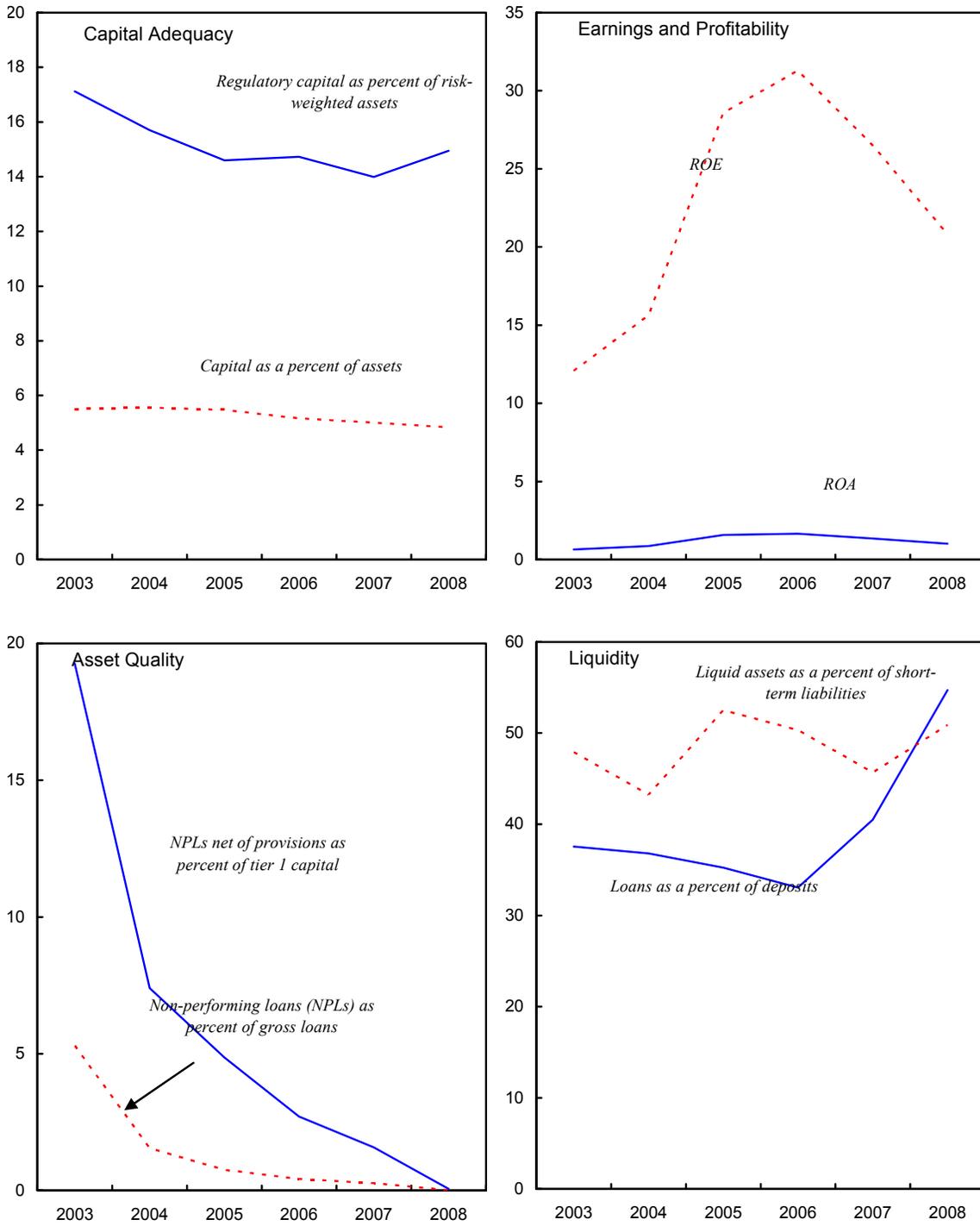
	2002	2003	2004	2005	2006	2007	2008
<b>Capital adequacy</b>							
Regulatory capital as percent of risk-weighted assets * 1/	15.4	17.1	15.7	14.6	14.7	14.0	15.0
Regulatory Tier I capital to risk weighted assets * 1/	15.4	17.1	14.9	13.6	13.6	13.0	13.8
Capital as percent of assets *	5.1	5.5	5.6	5.5	5.2	5.0	4.8
<b>Asset composition</b>							
Sectoral distribution of bank domestic credit to corporations *	30.9	28.7	29.9	26.1	23.2	27.6	30.2
Real estate	10.1	9.9	10.5	8.7	7.4	8.8	8.6
Construction	4.5	3.2	1.9	1.7	2.1	2.4	4.5
Manufacturing	2.6	2.5	2.7	2.8	2.2	1.8	2.3
Commercial	4.6	4.3	4.2	3.3	2.3	3.6	3.0
Public Utilities	0.5	0.7	0.5	0.3	0.2	0.3	0.3
Services	1.2	1.6	2.3	2.1	1.7	2.6	3.0
Banking and Financial Business	0.5	0.3	0.5	0.6	1.0	1.0	1.4
Other	6.9	6.1	7.3	6.6	6.3	7.2	7.1
Distribution of currency							
Loans in foreign currency	69	69	72	78	82	85	88
Loans in local currency	31	31	28	22	18	15	12
Claims on government (in percent)	0.1	0.0	2.0	0.3	1.0	0.5	0.6
<b>Asset quality</b>							
Non-performing loans (NPL) as percent of gross loans*	8.3	5.3	1.5	0.8	0.4	0.3	0.6
Loan loss provision to gross loans	1.0	0.8	0.5	0.2	0.1	0.2	0.4
Loan loss provision to NPL	11.7	15.8	29.4	29.8	27.5	68.9	65.0
Foreclosed assets as percent of total assets	0.8	0.4	0.2	0.2	0.1	0.0	...
Provisions + write-offs as percent of NPL	36.6	47.7	124.5	86.4	95.0	87.0	...
NPL net of provisions as percent of tier I capital* 1/	38.2	19.3	7.4	4.9	2.7	1.6	5.1
<b>Earnings and profitability</b>							
Net profits as percent of assets (ROA)*	0.6	0.6	0.9	1.6	1.7	1.3	1.0
Net profits as percent of equity capital (ROE)*	12.5	12.1	15.6	28.6	31.3	26.5	20.8
Net interest margin (net interest income as percent of assets) *	1.6	1.4	1.2	1.3	1.4	1.4	1.4
Net interest income as percent of gross income	68.0	59.4	53.0	46.0	49.7	53.6	49.2
Non-interest income as percent of gross income	32.0	40.6	47.0	54.0	50.3	46.4	50.8
Trading and foreign exchange income as a percent of gross income *	15.6	21.3	23.3	31.4	32.5	22.2	24.0
Non-interest expenses as percent of gross income*	44.1	46.3	47.8	38.5	38.1	43.9	54.6
Non-interest expenses as percent of average assets*	1.0	1.1	1.1	1.1	1.1	1.2	6.5
Staff costs as percent of non-interest expenses*	52.8	51.8	50.5	44.7	44.7	42.9	30.4
Spread between reference loan and deposit rates, period average*	2.7	2.5	2.4	2.9	2.8	2.3	...
Spread between highest and lowest domestic interbank rate, period	0.1	0.1	0.1	0.1	0.1	0.1	...
Number of employees	3,556	3,596	3,682	3,672	4,069	4,482	4,787
Number of branches	110	109	110	111	123	133	139
<b>Liquidity</b>							
Liquid assets as percent of total assets*	29.7	33.5	31.3	40.8	38.6	32.9	32.5
Liquid assets as percent of short-term liabilities *	44.0	47.9	43.2	53.8	51.6	46.9	50.9
Foreign currency loans as percent of total loans *	34.0	31.2	34.2	34.4	33.7	39.9	49.1
Foreign currency liabilities as percent of total liabilities *	74.9	73.4	77.5	85.8	86.0	85.7	79.9
Loans as percent of assets	68.0	68.6	64.7	71.7	72.3	74.1	80.0
Deposits as percent of assets	85.1	88.2	88.2	90.4	90.7	90.8	90.9
Loans as percent of deposits *	42.9	37.6	36.8	35.2	33.0	40.5	54.7
FX loans-to-FX deposits	39.3	34.1	34.6	35.9	35.7	43.2	60.4
<b>Sensitivity to market risk</b>							
Net open position in equities as a percentage of tier I capital 1/	n.a.	n.a.	n.a.	n.a.	n.a.	1.1	...
Aggregate net position in foreign exchange as a percentage of tier I capital	n.a.	n.a.	n.a.	n.a.	n.a.	111.8	...
Off-balance sheet and derivative as percent of assets	n.a.	n.a.	n.a.	n.a.	n.a.	0.0	...
of which foreign exchange operations	n.a.	n.a.	n.a.	n.a.	n.a.	1.3	...
of which interest rate operations	n.a.	n.a.	n.a.	n.a.	n.a.	4.0	...

Source: AMCM

\* Core and encouraged set of indicators.

1/ Locally incorporated banks only.

Figure 1. Macao SAR: Developments in Banking Soundness Indicators (In percent)



Source: AMCM.

19. **Counterparty risk could be high, given that banks place the bulk of their surplus liquidity with parent banks abroad, including the head office of parent banks.** The current global credit crunch could heighten challenges for Macao banks, especially if serious difficulties emerged at the parent institution. Some banks noted however, that the crisis has affected the counterparty risk they assign their correspondent international banks.

20. **Potential pressures on banks' earnings and capital could emerge from a sharp correction in the property market and/or an end or sharp deceleration of the casino boom.** Credit risk poses the main channel through which banks could be affected. An economic slowdown or further decline in real wages could affect household's debt service, which is already quite high at 50 percent of available income, as well as negatively impact the property market—a market that is highly volatile and less than a decade ago experienced a bust that led to a sharp increase in NPLs among banks.

21. **The authorities recognize these risks and are reviewing measures to address them.** The AMCM has initiated discussions with the banking industry to consider introducing limits of 70 percent on the loan-to-value ratio and 50 percent on borrowers' debt service. There are currently no such limits, with banks using their internal risk assessments and risk guidelines. That said, banks' profits and solid capital base should help buffer them against most of these credit losses. Credit risk is also somewhat mitigated as it is likely that foreign banks will provide support to their branches/subsidiaries, as they have done in the past.

### III. ASSESSMENT OF THE REGULATORY AND SUPERVISORY FRAMEWORK

22. **All financial institutions in Macao SAR are regulated and supervised by the AMCM.** The AMCM was established in 1989 as the successor institution to the Instituto Emissor de Macau with the functions of a quasi-central bank and with the powers to regulate and supervise the financial sector. The general legal framework for the financial sector is set out in laws and decree-laws, including the Financial Systems Act of 1993 (FSA) and the Decree-Law No.14/96/M, March 1996 (the Charter).<sup>15</sup>

23. **The AMCM has made significant progress in upgrading the regulatory and supervisory framework governing the financial sector and in implementing most of the recommendations of the 2002 OFC assessment.** Generally, the regulatory and supervisory framework exhibits a high level of compliance with BCP. The AMCM has addressed a number of gaps identified in the 2002 OFC assessment, including issuing regulations and supervisory guidelines governing bank internal control, implementing the 1996 capital market risk amendment, and addressing country risk, large exposure rules and electronic banking. It has published a number of supervisory guidelines for consultation, including on

---

<sup>15</sup> Laws and regulations are available on AMCM's website at <http://www.amcm.gov.mo>.

interest rate risk management, investment management and residential mortgages. It has drafted guidelines on business continuity, liquidity risk and outsourcing. Staffing constraints identified in the 2002 assessment (both in insurance and banking) are being addressed.

24. **Notwithstanding this progress, the absence of the operational independence for the financial regulator in the law undermines the supervisory framework.**<sup>16</sup> Under the legal framework, the final decision making authority over regulatory issues critical to assuring the soundness and stability of the financial system, such as corrective actions in the event of banking problems or the appointment of a bank liquidator, rest with the chief executive of Macao SAR. Furthermore, the chief executive has the authority to approve all licenses for carrying out financial activities (both in banking and insurance) based on the advice of the AMCM. The chief executive also has decision making power over the regulation of tariffs and sanctions. Moreover, the chief executive also appoints the chairman and the board members of the AMCM, with the appointment terms fixed for two years. While the process for dismissal is not spelled out in the law,<sup>17</sup> the chief executive also approves the budget of the AMCM. This powerful role of the chief executive in the supervision and regulation of financial institutions is not in keeping with best international practices in banking supervision.

25. **The legal subordination of the AMCM to the chief executive has the potential to lead to interference or delaying regulatory action and operational supervisory decisions.** The possibility exists that the chief executive could decide against the AMCM's proposed regulatory decisions, thereby threatening the ability of the AMCM to achieve its objective of assuring financial stability.

26. **Against this backdrop, the financial laws should be amended to provide the AMCM operational independence and enforcement power over regulatory decisions.** Furthermore, transparent procedures that permit the vetting of the nominee with a public body such as the Parliament should be established in the law for the appointment and dismissal of the chairman and the members of the board. For instance, in many jurisdictions governors/chairman are often appointed by the head of state on the advice of the government. The chairman's appointment should be for a significant fixed term (e.g., 5–7 years would not be unusual in other jurisdictions) and there should be objective safeguards for dismissal—with conditions for dismissal explicitly stated in the law. By contrast, a two-year term may not allow sufficient time for an appointee to develop the understanding of the financial system and quickly evolving products required to effectively supervise the system. The longer term would also increase the independence of the chairman. On the rare occasions in

---

<sup>16</sup> Most of the financial sector laws have not been amended subsequent to the handover in 1999. As such, they reflect the power structure under the former Portuguese rule where significant political and economic power rested with the Governor of Macau.

<sup>17</sup> The board of directors comprises a minimum of three and a maximum of five members. Members are all executives of AMCM and the chairman is the chief executive officer.

which the chairman is to be dismissed, the reasons for doing so should be clear and publicly disclosed. Finally, the AMCM should have sole legal enforcement powers over a range of supervisory issues, including the granting and revocation of licenses and corrective/remedial measures.

27. **The AMCM should move toward a risk-focused supervisory approach for banking.** The current focus is still largely compliance driven. The adoption of a risk-based approach would enhance the understanding of potential risks and vulnerabilities in the financial system, which is currently not done. The significant presence of foreign financial institutions warrants information exchange with home country supervisors to aid in assessing the financial condition of the parent bank and having a sound understanding of home country developments, and their impact on the local financial system. The offsite approach should also include the implementation of an early warning system and periodic stress tests to monitor the resilience of banks to extreme but plausible shocks. These measures would enable the AMCM to target onsite reviews to areas of emerging risk.<sup>18</sup> More broadly, the AMCM should continuously assess the adequacy of banks' risk strategies, policies and procedures to withstand the types of shocks that could likely occur in Macao's financial system and economy. Based on the outcome of the stress test, the AMCM could then require certain corrective measures, if deemed necessary. A complete onsite examination manual consistent with the risk based approach would be helpful.

28. **In the area of insurance supervision, the AMCM should review its supervisory priorities, since its staff currently dedicate too much of their capacity to noncore regulatory activities.** Noncore functions such as the management of guaranteed funds for motor insurance and the administration of customer complaints should be outsourced. The focus should instead shift to strengthening the supervision of the insurance entities AMCM is regulating, including by carrying out full scale onsite inspections, which except for AML related issues have not been done, and by asking insurance entities to submit and analyze claims performance in nonlife. As a matter of priority, an onsite inspections handbook should be developed, as recommended by the 2002 OFC assessment.

#### **A. Cross Border Information Exchange and Cooperation**

29. **In view of the strong presence of foreign financial institutions in Macao SAR,** the AMCM depends heavily on effective cross border and home supervision and sound parent financial institutions for assuring the soundness and safety of its financial sector.

30. **On banking, the AMCM has the key elements in place for assuring cross border information exchange and cooperation.** The AMCM has the ability to share information

---

<sup>18</sup> Plausible shocks in the current macroeconomic conjecture would be to have banks run a stress test on a segment of the loan book against a sharp correction in property prices and/or sharp deterioration in household debt servicing capacity.

with foreign regulators and does so in practice. It further has signed MOUs with the Chinese mainland, Portugal, and HKSAR, covering more than 90 percent of the banking sector. There is also an informal arrangement in place with the Taiwan Province of China (POC) financial regulators. Annual or semi-annual meetings are held with the home country supervisors to exchange information on the condition of the MSAR operations and to seek information from the home country supervisors concerning issues that may affect the condition of the MSAR bank/branch. The AMCM conducts onsite and offsite supervision of both branches and subsidiaries.

31. **To make the cross border framework more comprehensive, the AMCM should include an assessment of the financial condition of the parent bank, of the country's economic conditions, and of the quality of the home country supervision.** As foreign bank branches and subsidiaries place their excess funds with the parent and play a critical role in MSAR's banking sector, it is important to actively engage with the home supervisor to understand the strength of the parent, the bankruptcy regime in the home country, and monitor transfer risk in the home country. Currently, the AMCM informally tracks events in the home country by monitoring financial publications, published annual statements and other public sources of intelligence in addition to its meetings with home supervisors. However, the effectiveness of risk monitoring can be enhanced by reviewing market reports on the country and parent banks. Depending on the results of the analysis, the AMCM could adjust the frequency and scope of examinations and increase visits to banks that are experiencing home country concerns. Currently, the onsite examination scope is the same for branches and subsidiaries.

32. **Cross-border cooperation and information sharing between AMCM and the home insurance regulators should be strengthened.** Currently, for more than half (which account for 35 percent of the market share) there are no such cross-border arrangements with the insurance regulators in the jurisdictions. Potential problems could go undetected. It would be best if most branches operating in Macao SAR be covered through MOUs agreed between the host and home supervisor so that all relevant supervisory information is shared.

## **B. Financial Safety Net**

33. **The AMCM has a number of policy measures in place that would help buffer the financial system in the event of a bank failure.** These include: requiring banks to maintain minimum reserve requirements;<sup>19</sup> a standing facility for liquidity management in pataca; and a liquid asset requirement of 30 percent. The standing facility is accessed at the initiative of commercial banks where they can place their excess pataca in return for AMCM monetary bills. The AMCM further provides emergency liquidity assistance through the

---

<sup>19</sup> These are set at 3 percent of demand deposits, 2 percent of time deposits up to three months and 1 percent on time deposits of over three months.

discount window, consistent with its lender of last resort (LOLR) duties, as spelled out in the FSA. Access to this window is collateralized. However, the modalities governing access to the emergency facility should be more clearly spelled out. Access to the LOLR should be restricted to solvent but illiquid banks and an overall access limit should be defined.

34. **While the AMCM has a well defined bank resolution process, consideration should be given to developing a rapid remedial action framework in order to facilitate an orderly approach to addressing a banking problem.** The law describes in great detail and comprehensively the scope of actions that can be taken in the bank resolution and liquidation process. Trigger points have been established for internal use when capital levels fall below 12 and 10 percent but the required actions by the bank or the AMCM are not defined. These triggers, that is when regulatory falls below a legally required minimum, and the ensuing specific actions should be specified in the law. The role of the AMCM as central bank, and conditions under which it would provide liquidity along with the role of the government in the bank resolution and liquidation process should also be clarified. The role of the chief executive of Macao SAR should be restricted to ensure that the AMCM has full control over the enforcement of the resolution process and can act quickly and efficiently in the face of an emerging banking problem or broader banking crisis.

35. **Given a series of events in the global financial market, the Macao SAR Government announced on October 14, 2008 that it would provide full protection for customer deposits held with all banks authorized in Macao SAR.** Also, if necessary, it would provide sufficient liquidity and capital support to banks, for the purpose of maintaining the stability of the MSAR banking system and enhancing the protection of depositors. These measures will remain in force until the end of 2010 when a review will be taken in light of the situation then.<sup>20</sup>

36. **Following the expiration of the blanket guarantee, the government could consider introducing an explicit deposit insurance scheme.** Up to October 2008, there had been no formal scheme in place. The government has in the past provided financial assistance when a bank failed (as was the case of the Bank of Credit and Commerce International (BCCI) in the early 1990s). Having an explicit deposit insurance is a central component of a sound financial safety net. One of its main objectives is to avoid bank runs and to assure an orderly bank resolution process. Overall, in considering an explicit deposit insurance scheme (DIS), the government would need to make sure that it is governed by strong principles—for example, that it is explicitly and clearly defined in the law, includes mandatory membership by deposit taking financial institutions, sets coverage and payout limits, charges premiums, and widely disseminates information about the scheme to

---

<sup>20</sup> The AMCM is reviewing the pros and cons of such a scheme, including studies on the relevant legal framework, scope of insurance coverage, form of participation, calculation of premium, fund management and operation model.

stabilize depositor fears. On membership, branches of foreign banks or their locally corporate subsidiaries would be required to become members of the DIS. While there may be the perception that either the parent bank or the deposit scheme in the home country, if one exists, would come to the rescue if one of the foreign banks ran into difficulties, this cannot always be counted on. Also most home country deposit schemes do not cover retail deposits in foreign subsidiaries and branches. On coverage, foreign currency deposits should be included given that they make up a significant share of retail deposits; however, it should be stipulated that any insured deposit repayment will be made in local currency.

### C. Basel II Implementation

37. **The AMCM plans to implement the simplified standardized approach for credit risk while for operational risk it will allow banks the option of the basic indicator approach or the standardized approach.** Although a timetable has not been established, the AMCM will first implement the operational risk charge since it is a risk not covered by the current capital guidelines, before moving to implement the revised credit risk standards. The AMCM conducted an impact study on operational risk this year and is likely to implement the standard next year. Afterwards, an impact study for credit risk will be conducted next year. On Pillar 3, the AMCM is drawing on the experience of neighboring counterparts like the Hong Kong Monetary Authority (HKMA) and the Monetary Authority of Singapore (MAS) to implement a similar approach with local adaptations. For Pillar 2, although the AMCM has not initiated the supervisory review process, it is working on guidelines, emphasizing the management of those risks not addressed in Pillar 1.

### D. Disclosure of Financial Information and Accounting Issues

38. **The quality of financial disclosure has improved significantly since the 2002 assessment.** The AMCM is reporting to the IMF's Information Framework Initiative which was launched in 2004. Data reported includes size and scope of activities in banking and insurance, information on assets, income source (net interest versus fee income), as well as locational banking statistics that it submits to the Bank of International Settlements (BIS). The AMCM is further posting a range of financial soundness and economic indicators on its website. It also is collecting market risk indicators from banks since 2007.

39. **Notwithstanding this, the overall quality of financial disclosure and collection could be further strengthened.** This would help provide a more accurate analysis of banking soundness and systemic risk. To this end, the AMCM could consider publishing the quarterly financial data reported by banks (the so-called trial balance sheet published in the Official Gazette) on its website. It could further provide a broader set of summary financial soundness indicators, in line with the Fund's core set, on its website. To enhance the transparency of banks' financial statements, the current accounting law should be amended to allow for the full introduction of the remaining IFRS, including IAS 39. This would address the problem that there are no guidelines of which accounting standards to use for those not

covered under the IFRS.<sup>21</sup> Finally, the bank returns for supervisory purposes would benefit from increasing the granularity of information collected on outstanding loans. Collecting information on delinquent loans by term of delinquency tranches, loan classification category, and increased breakdown of sector distribution of the loan portfolio would better support risk-based supervision and offsite analysis.

### **E. Anti-Money Laundering**

40. **A ME of Macao SAR's AML/CFT framework was conducted against the FATF 40+9 Recommendations in December 2006.** The evaluation was carried by the Asia Pacific Group on Money Laundering (APG; the FATF style regional body of which Macao SAR is a member) and the Office Group of Banking Supervisors (OGBS), using the 2004 methodology. The final ME report was adopted and published by the APG in July 2007. It indicates that, since it was last evaluated in 2001, Macao SAR has taken a number of steps to enhance the effectiveness of its AML/CFT framework, especially in 2006, by amending the existing legal framework and issuing AML/CFT Regulations for all the relevant sectors. Guidelines for the financial institutions were also issued by the AMCM in light of the new regulations.

41. **Overall, the evaluators found that the AML/CFT measures in place were sound but lacked the necessary level of detail to comply fully with the 40+9 Recommendations.** They noted in particular that existing customer due diligence obligations should be strengthened notably by requiring financial institutions to verify the identity of persons on whose behalf a customer is acting, to understand the ownership and control structure of legal arrangements and to perform ongoing due diligence. The evaluators also found that the supervisory and oversight system of the AMCM was good, especially with respect to banks. A ROSC prepared by the APG Secretariat on the basis of the ME report and reviewed by the Fund's Legal Department will be circulated separately to the Executive Board for information.

42. **As part of the BCP assessment, the mission found that the AML/CFT regulatory and supervisory framework governing banking was compliant**—in line with the findings of the APG ME report.

---

<sup>21</sup> In 2005, Macao adopted 16 out of 41 IFRS (effective January 1, 2007). For remaining standards, as there is no Macao GAAP (generally acceptable accounting practices), companies tend to either apply the accounting practices of their head office or parent company or those common to HKSAR from where most of the accountants are sourced. Indeed, the Committee for the Registry of Auditors and Accountants, a statutory regulatory body of the auditing and accounting profession, aims for full adoption of the IFRS. It has issued a consultative paper to interested parties seeking their views on the proper timing for adoption of the remaining standards.

**APPENDIX I. STATUS OF IMPLEMENTATION OF THE 2002 RECOMMENDATIONS**

<b>2002 Recommendations</b>	<b>2008 Status of Implementation</b>
<b>Supervisory Resources</b>	
<ul style="list-style-type: none"> <li>• Staff complement/resources of the AMCM should be reviewed in the light of current unfilled and the additional responsibilities, including in the area of off and onsite financial supervision (banking and insurance).</li> <li>• Additional staff should be added so that banking and nonbanking risks are identified and supervisory guidelines are developed in a timely manner.</li> </ul>	<ul style="list-style-type: none"> <li>• After the assessment in 2001, the Banking Supervision Department (DSB) has increased its human resources by adding seven professional staff and two support staff. At the same time, three professional staff were transferred to another department of the AMCM or the Financial Intelligence Office (established in 2006) and one support staff retired. In total, the DSB has currently 23 staff members, comprising of 17 professional staff and 6 support staff. As compared with the figures of the last assessment, the numbers of professional staff and support staff increased by four and one respectively. In addition, there are three professionals who have been engaged by the AMCM between 2005 and 2007 on a contractual basis to provide advisory services and/or technical assistance in the area of banking supervision. They are now working with the AMCM. Furthermore, DSB has budgeted for two more staff members to be recruited in 2008 and another two in 2009.</li> <li>• The Insurance Supervision Department (DSG) has reviewed and examined its supervisory priorities and has developed a short-term and long-term supervisory program which included issuing new guidelines for on- and off-site supervision, preparing an on-site inspection manual and training of new staff.</li> <li>• In view of the above, one staff (with actuarial background) was recruited in May 2008; a colleague from another department in AMCM is due to be transferred to DSG at the end of the year. Another one or two additional staff would be recruited for the Supervision Division in 2009 to carry out on-site examination and supervisory work.</li> </ul>
<b>Banking Supervision</b>	
<ul style="list-style-type: none"> <li>• AMCM should be granted final prudential decision making power under general policy guidelines set by the government.</li> </ul>	<ul style="list-style-type: none"> <li>• In an economy like the Macao SAR, the AMCM's independence has been implied in such a way as below:</li> </ul>

<ul style="list-style-type: none"> <li>Legislations should be amended and enacted to provide AMCM operational independence from the Government of Macao SAR.</li> </ul>	<ul style="list-style-type: none"> <li>The AMCM is an autonomous body with its own Charter (Decree-Law no. 14/96/M), under which the AMCM is vested with not only duties but also commensurate powers;</li> <li>Financially, the AMCM has its own budget and has sufficient resources required for performing its statutory duties;</li> <li>Operationally, the AMCM can make its own decision on all the matters that falls within its scope of statutory competence. As for those matters that the AMCM is legally obligated to give advice only, the track record indicated that the SAR government has been in favor of the AMCM except for one administrative proceeding, where an unauthorized financial operation occurred because of administrative procedural flaws.</li> <li>In terms of personnel, the AMCM also has full discretion in appointing HR management except for members of the board who are appointed by the SAR government for a specific term. The term of appointment is currently two years.</li> </ul>
<ul style="list-style-type: none"> <li>Market risk should be included in the Basel CAR calculation.</li> <li>Issue guidelines on market risk.</li> <li>Conduct formal assessment of market risk.</li> </ul>	<ul style="list-style-type: none"> <li>The AMCM has enhanced the capital adequacy rules by introducing regulatory capital charge requirements for market risk with details as stated in the Notice "Determination of Market Risk Adjusted Capital Adequacy" which resulted from two rounds of comprehensive surveys and subsequent in-depth analyses and assessments.</li> <li>Based on the quarterly returns submitted by the credit institutions in accordance with the said Notice, the AMCM will conduct an assessment of market risk on a regular basis through on- and off-site examinations.</li> </ul>
<ul style="list-style-type: none"> <li>Issue guidelines on, and conduct formal assessment of interest-rate risk.</li> </ul>	<ul style="list-style-type: none"> <li>The AMCM has drafted a new guideline on the management of interest rate risk, including a supervisory return intended for regular submission on a quarterly basis, and has just completed the industry consultation. After the implementation of this guideline, the AMCM will conduct relevant assessment of interest rate risk on a regular basis.</li> </ul>

**APPENDIX II**  
**REPORT ON THE OBSERVANCE OF STANDARDS AND CODES (ROSC) FOR THE BASEL CORE**  
**PRINCIPLES FOR EFFECTIVE BANKING SUPERVISION**

**Summary**

1. **In general, there is a high level of compliance with the Basel Core Principles (BCP).** The body of laws, rules and regulations are comprehensive and well developed, and provide a solid framework for banking supervision. There has been significant improvement in a number of areas since the 2002 OFC assessment.
2. **Notwithstanding, a critical recommendation of the 2002 OFC assessment to amend the laws to address shortcomings in the operational independence of the AMCM as financial regulator remains an outstanding issue.** The AMCM continues to have inadequate legal independence and lacks final decision authority over critical supervisory issues.
3. **Going forward, the conduct of supervision will need to evolve from a more compliance approach toward a risk-focused one.** This would be in line with the risk-oriented regulations and guidelines issued over the past two years, with far greater emphasis on the comprehensive assessment of the risk profile of individual banks and financial systemic risk.

**Introduction**

4. **An assessment of BCP for Effective Banking Supervision was conducted as part of the Update OFC assessment of Macao SAR.**<sup>1</sup> The assessment of the BCP was based on the essential criteria and additional criteria. The organization assessed was the AMCM—the financial regulator and supervisor of commercial banks.
5. **The assessment covered three objectives:** (i) assess the implementation of the 2002 mission’s recommendations; (ii) assess compliance with the BCP for Effective Banking Supervision, based on the 2006 revised principles; and (iii) review the framework for cross-border supervisory coordination and information sharing.

**Information and methodology**

6. **The assessors received prior to the mission start from the authorities their comprehensive self assessment and also had full access to all relevant staff within AMCM** (including the Banking Supervision Department, other Departments, such as Insurance, Statistics and Research, as well as members of the Board of Directors), and all the

---

<sup>1</sup> The assessors were Mr. Jose Tuya (formerly with the Office of the Comptroller of the Currency, United States) and Mr. Michael Deasy, from the Irish Financial Services Regulatory Authority.

relevant laws governing the financial sector. The assessors also met a number of external parties, including the Secretary for Economy and Finance, six commercial banks, both branches and subsidiaries as well as an offshore branch of a foreign bank, the Bankers' Association, the Committee for the Registry of Auditors and Accountants, an audit and accounting firm and a legal firm.

### **Institutional structure**

7. **Responsibility for the regulation and supervision of the banking sector rests with the AMCM.** The legal basis for banking supervision is set down in the Financial System Act of Macao (Decree-Law No. 32/93/M, 1993, otherwise known as the FSA) and the Decree-Law No.14/96/M, 1996 (also known as the Charter), supporting Decree-Laws No.58/99/M, 1999, which deals with the offshore regime of Macao SAR; No.15/83/M, 1983, which deals with the finance companies, as well as No.38/97/M for money changers; No.39/97/M for exchange operators, and No.15/97/M for cash remittance companies.<sup>1</sup> The laws are supplemented by 16 notices and circulars of rules and guidelines dealing with capital adequacy, liquidity, market, country and other risks, internal controls, and anti-money laundering. The Banking Supervision Department (BSD) within the AMCM is responsible for the supervision of 30 credit institutions, 11 money changers (i.e., bureau de change), 2 cash remittance companies, 2 securities traders (with head offices in Hong Kong SAR), and 6 money exchange operators.

### **Preconditions for effective banking supervision**

8. **Macroeconomic management in Macao SAR has traditionally been conducted in a prudent and conservative manner.** This has helped provide stability to Macao SAR's financial system. Macao SAR has a currency board arrangement with the local currency, the pataca, pegged to the Hong Kong Dollar since 1977. By law, foreign exchange reserves must at least cover 100 percent of the monetary base. Fiscal policy, which can be used as a countercyclical instrument, is conservatively managed, and the government has no public debt, a substantial amount of fiscal reserves, and a Moody's Aa3 sovereign rating.

9. **Macao SAR has a well developed legal system that is heavily influenced by the Portuguese legal system.** Its legislative regime for issues relating to the efficient and smooth running of a banking environment is in place (e.g. insolvency, foreclosure, collateral).

10. **The accounting framework, however, is lagging somewhat.** Macao SAR is in the process of adopting IFRS. To date it has adopted 16 IFRSs, but for accounting issues not covered by these standards, the law simply states that accounts should be prepared in accordance with generally accepted accounting principles without specifying what is meant by "generally." In practice, many of the banks adopt the accounting standards of their overseas head office/parent, most of which are applying either IFRSs or standards drawn

---

<sup>1</sup> Laws and regulations are available on AMCM's website at [http://www.amcm.gov.mo/rules\\_and\\_guidelines](http://www.amcm.gov.mo/rules_and_guidelines).

from IFRSs. To enhance the transparency and credibility of its accounting system, Macao SAR should adopt the IFRS system in full.

## **Main findings**

### **Previous assessment**

The 2002 assessment recommended that:

- The AMCM be granted independence from the government of Macao SAR. This would have required an amendment of the laws, and no such change has occurred. The issue remains a significant shortcoming.
- Market risk be included in the Basel capital adequacy ratio requirement. This has since been addressed.
- The AMCM issue guidelines governing interest rate, country, concentration, market risks. This has been done. Various guidelines have been introduced for the identification, monitoring and measurement of such risks.
- Staff resources be reviewed in light of vacant positions and redefined responsibilities. The BSD has since increased its resources by a net four professional staff and one support staff, bringing its current complement to 23—i.e. 17 professional and 6 support. It is also in the process of recruiting four additional staff over the next year. At this level, its staffing complement appears complete.
- Development of procedure manuals, particularly to support onsite inspections. The AMCM has commenced the drafting of an onsite manual. Six of the 14 chapters therein are complete and are being applied. The remaining chapters are being worked on.

### **Current assessment**

#### ***Independence (BCP 1.2)***

11. **The assessment found shortcomings in the independence and power granted under the law to the Chief Executive of Macao SAR (chief executive).** For important supervisory matters—such as licensing and revocation of licenses, approving the AMCM’s budget, appointing the chairman and other members of the board of directors, and dismissing the chairman of the AMCM—the law gives the chief executive the final authority and decision making power.

12. **While there is no evidence that the chief executive has ever interfered in the operational independence of the AMCM** and has approved the advice put forward by the AMCM, the possibility exists that he or she could, thereby undermining the ability of the AMCM to achieve its objective of assuring financial stability.

*Recommendation*

- **Amend the FSA and the Charter to give operational independence to the AMCM.** As part of this amendment, the AMCM should have full licensing authority (approval and revocation); the appointment of the chairman should be confirmed by a broader body (such as the Legislative Assembly); the AMCM should be able to set its overall budget, without government approval; and finally, the dismissal conditions for the chairman should be clearly spelled out in the law.

*Legal powers (BCP 1.4)*

13. **The legislation provides a full range of corrective/remedial measures that can be used when a bank encounters difficulties.** However, it is the chief executive who takes the decision on whether they should be implemented or not, on the advice of the AMCM. In addition to undermining the AMCM's independence as described under BCP1.2, having to take the extra step to have to advise the chief executive and allowing him or her the time to consider the matter, valuable time will have been lost in a situation where timely action is critical to assuring a sound and effective bank resolution process.

*Recommendation*

- **Amend the legislation to give full legal powers over a range of supervisory issues,** including corrective and remedial measures that can be taken when a bank is in difficulty, to the AMCM. Remove the role of the chief executive in Articles 83 and 85.

*Exposure to related parties (BCP 11)*

14. Neither existing legislation nor supervisory guidelines address the issue that all loans to related parties should be at arm's length.

*Recommendation*

- **The AMCM should introduce an explicit requirement that loans to related parties are not granted on terms more favorable than those granted to third parties.**

*Supervisory approach (BCP 19)*

15. The AMCM receives considerable balance sheet and income information from the banks through the prudential returns, and identifies any development that is deviated from trend for follow-up with banks. However, the AMCM does not have a systematic approach to detecting trends and indicators that could point to emerging problems in the banking system as a whole.

*Recommendation*

- **The AMCM should enhance its offsite analysis to deepen the trend analysis it undertakes for individual banks** (incl. information of the parent banks) and collate this into a systemic risk analysis framework for the overall banking sector. This analysis can serve as the basis for the development of an early warning system.

*Corrective and remedial powers of supervision (BCP 23)*

16. It is standard international practice among financial regulators that the regulator has decision making authority where corrective/remedial actions against a particular bank or in the event of a banking crisis are required. While the AMCM is involved in the decision forming process—that is it advises the chief executive on the type of actions required—it is the chief executive who makes the final decision. The chief executive could, in theory, decide against the AMCM’s proposed corrective actions.

*Recommendation*

- **Amend the legislation to give the AMCM full decision making power over the corrective actions and remedial powers of supervision**, thereby eliminating the role of the chief executive in the matter.

**Appendix Table 1. Summary Compliance with the Basel Core Principles—ROSCs**

<b>Core Principle</b>	<b>Comments</b>
1. Objectives, independence, powers, transparency, and cooperation	For all of these criteria, except independence, the AMCM is compliant.
1.1 Responsibilities and objectives	
1.2 Independence, accountability and transparency	The AMCM is not independent of the Government. The chief executive has the final say in a number of very important supervisory matters, e.g. licensing and revocation of banks. The chairman should be appointed by the Legislative Assembly rather than the chief executive and the terms of removal should be spelt out and published. The AMCM should be able to set its overall budget, without government approval.
1.3 Legal framework	
1.4 Legal powers	The AMCM should have the final decision making authority in implementing corrective or remedial action to assure timely and effective bank resolution.
1.5 Legal protection	
1.6 Cooperation	
2. Permissible activities	
3. Licensing criteria	
4. Transfer of significant ownership	
5. Major acquisitions	
6. Capital adequacy	
7. Risk management process	
8. Credit risk	
9. Problem assets, provisions, and reserves	
10. Large exposure limits	
11. Exposure to related parties	The AMCM should introduce an explicit requirement that loans to related parties are not granted on terms more favorable than those granted to third parties.
12. Country and transfer risks	
13. Market risks	
14. Liquidity risk	
15. Operational risk	
16. Interest rate risk in the banking book	
17. Internal control and audit	
18. Abuse of financial services	
19. Supervisory approach	The AMCM should enhance its offsite analysis to deepen the trend analysis it undertakes for individual banks and collate this into a systemic risk analysis framework for the overall banking sector.
20. Supervisory techniques	
21. Supervisory reporting	

22. Accounting and disclosure	
<b>Core Principle</b>	<b>Comments</b>
23. Corrective and remedial powers of supervisors	The AMCM should have the final decision making power in implementing corrective or remedial action to avoid delays and to assure effective bank resolution.
24. Consolidated supervision	
25. Home-host relationships	

**Appendix Table 2. Recommended Action Plan to Improve Compliance with the Basel Core Principles**

Reference Principle	Recommended Action
BCP1.2, BCP1.4, and BCP23	Amend legislation to give greater operational independence to the AMCM: The Chairman should be appointed by the Legislative Assembly rather than the chief executive and the terms of removal should be spelt out and published. The AMCM should be able to set its overall budget, without government approval. The AMCM should have the final decision making authority in implementing corrective or remedial action to assure timely and effective bank resolution.
BCP11	The AMCM should introduce an explicit requirement that loans to related parties are not granted on terms more favorable than those granted to third parties.
BCP19	The AMCM should enhance its offsite analysis to deepen the trend analysis it undertakes for individual banks and collate this into a systemic risk analysis framework for the overall banking system.

***Authorities' response to the assessment***

1. **Regarding the independence and legal powers of the AMCM**, the authorities highlighted the complexity of addressing the issue and report that it will require major legislative changes and an overhaul of the administrative structure of the Macao SAR government in relation to the regulation of the financial market. The issue has already been raised to the Secretary of Economy and Finance and BCP1.2, BCP1.4 and BCP23 will then be jointly addressed. In addition, formulation of guidance on how to proceed with the emergency or intervention measures in the event of bank difficulties as recommended for BCP 23 will be considered.
2. **Currently, the FSA, which has come into force since 1993, is now under review for amendments.** Industry has been invited to give opinions about the adaptability of the Act to its current operating environment and any suggestions of changes. Revision of the FSA

will be prepared on the basis of these comments and opinions, together with the AMCM's past experience gained from its supervisory work in relation to the implementation of the Act as well as relevant international supervisory standards.

3. **In the review process, consideration will be made to see if a specific provision should be added in the FSA**, addressing the requirement that loans to related parties should be granted on an arm's length basis. Or alternatively, certain supervisory guidelines may include such requirement.

4. **Offsite analysis will be enhanced in the following ways:**

- Implementation of a more systematic early warning system and periodic stress testing will be considered.
- Following the finalization of the new rules on asset classification and provisioning, more detailed information for credit risk analysis will be collected through bank returns like increased breakdown of loan categories and respective delinquency ratios.
- To enhance understanding of the circumstances of the head office banks or parents, regular updates to relevant risk profiles will be performed by making reference to credit rating reports, and visits will be paid to these overseas institutions, if necessary.

5. **Regarding the deposit insurance scheme, the AMCM understands that the deposit insurance scheme is one of the components of a sound financial safety net.** The AMCM has conducted a study in the past on whether Macao SAR should introduce one. The study concluded that Macao SAR did not have an immediate need for such a scheme. In accordance with Article 12 (i) of the Charter, the AMCM is charged with a responsibility to act as a LOLR, and it believes that this LOLR element, together with prudential supervision, would continue to play a major role in the operations of Macao SAR's financial safety net in the foreseeable future. In addition, the MSAR government paid all depositors when BCCI collapsed in early 1990s and this is the only case of bank failure in Macao SAR so far. Notwithstanding, the AMCM plans to review again the deposit insurance scheme, including studies on the relevant legal framework, scope of insurance coverage, form of participation, calculation of premium, fund management and operation model.