

Abu Dhabi

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Vision

# Abu Dhabi Real Estate Market Forecasts

مجلس أبوظبي للتخطيط العمراني  
ABU DHABI URBAN PLANNING COUNCIL



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## Executive Summary

This **Abu Dhabi Real Estate Market Forecast** presents an analysis of the future supply and demand for residential, office, retail and hotel real estate within the Abu Dhabi metropolitan area from 2009 to 2013. These findings comprise an extract from a more extensive research study undertaken by the project team, which included the development of a new Macroeconomic & Demographic model as well as a Real Estate Supply & Demand Model for Abu Dhabi to 2030.

In times of global and local economic transformations, the **Abu Dhabi Real Estate Market Forecast** is an effort of the Abu Dhabi Urban Planning Council to plan and implement its urban structure framework plans in accordance to key market indicators. It allows for the planned development across the city and the Emirate as a whole to respond to the needs of the real estate market.

The following tables summarise the major findings of the study in respect of the next 4 years (2009 – 2013):

### Key Macroeconomic & Demographic Indicators (2009 & 2013)

Indicator	Unit of Measurement	2009	2013	% change (p.a.)
Real GDP	AED million (AD Emirate)	314,000	398,100	6.1%
Population	Persons (AD Metropolitan)	969,000	1,189,000	5.2%
Total Employment	Persons (AD Metropolitan)	574,300	693,000	4.8%
Office Employment	Persons (AD Metropolitan)	194,400	232,000	4.5%
Hotel Nights	Room nights (AD Metropolitan)	4,936,800	7,182,000	9.8%
Retail spending	AED million (AD Metropolitan)	18,915	23,300	5.4%

Source: Macroeconomic & Demographic Model

### Key Real Estate Indicators (2009 & 2013)

Indicator	Unit of Measurement	2009	2013	% change (p.a.)
Residential Supply	Units (AD Metropolitan)	177,400	251,200	9.1%
Residential Demand	Units (AD Metropolitan)	226,000	277,500	5.3%
Office Supply	Sqm of GLA (AD Metropolitan)	1,810,000	3,559,000	18.4%
Office Demand	Sqm of GLA (AD Metropolitan)	2,940,000	3,495,000	4.4%
Retail Supply	Sqm of GLA (AD Metropolitan)	1,426,000	2,510,000	15.2%
Retail Demand	Sqm of GLA (AD Metropolitan)	2,106,000	2,315,000	2.4%
Hotel Supply	No of rooms (AD Metropolitan)	13,500	26,500	18.4%
Hotel Demand	No of rooms (AD Metropolitan)	13,500	19,700	9.9%

Source: Real Estate Supply & Demand Model (based on discussions with UPC & developers for supply and Macroeconomic & Demographic Model for demand)

### Key findings of the Abu Dhabi Real Estate Forecast:

- **A MARKET CURRENTLY UNDER SUPPLIED:** The Abu Dhabi real estate market is currently under-supplied with the demand exceeding supply in three sectors of the market (residential office and retail) in 2009 and with the hotel sector being relatively in balance.
- **ECONOMIC GROWTH AND DEMOGRAPHICS:** Demand is expected to increase in all sectors of the real estate market over the study period, being driven by the continued growth in the population and economy of Abu Dhabi. The average economic growth in Abu Dhabi Emirate over the study period is at 6.1%, while the population is expected to increase by an average of 5.2% per annum in the Abu Dhabi metropolitan area.
- **AN INCREASING DEMAND:** Increases in the demand for real estate between 2009 and 2013 range from 2.4% per annum in the retail sector to 9.9% per annum in the hotel sector of the market. In addition to the growth in the underlying demographic and economic drivers, this increase reflects the significant level of latent demand resulting from the inadequate availability of real estate stock in Abu Dhabi.
- **AN INCREASING SUPPLY:** The construction industry has responded to the current shortage of supply, by proposing a large number of new projects, which are scheduled to complete over the next few years. The fastest increases in supply will be recorded in the office, retail and hotel sectors that are forecast to grow between 15 - 19% per annum from 2009 to 2013.
- **SHORTAGE DECREASING:** Despite the significant levels of new supply expected to enter the market, aggregate demand is expected to remain ahead of the total supply in the residential sector. The current shortage of around 48,400 units is expected to decline to around 26,300 by 2013.
- **LINKS TO OTHER EMIRATES:** Given their close physical proximity and increased economic integration, future demand levels in Abu Dhabi will also be inextricably linked to trends in the Dubai market. This is expected to be most closely felt in the residential sector, where continued declines in residential rental levels in Dubai could shift the residential demand curve for the Abu Dhabi market in 2010/2011.
- **RENTALS:** While not an explicit component of the real estate demand and supply model prepared for this assignment, changes in real estate prices and rentals will have a critical impact upon future demand. The expected fall in residential rentals in the Abu Dhabi market will unlock much of the current latent demand that will contribute to the projected level of future demand.
- **OFFICE SECTOR:** The supply for office space will increase at a faster rate than the demand. The proposed supply will lead to a total stock of approximately 3.6 million sq.m by the end of 2013, compared to a forecast demand of around 3.5 million sq. m.
- **RETAIL SECTOR:** The retail sector is currently under supplied by approximately 700,000 sq.m. This sector is forecast to move into a surplus situation as more than 1 million sq.m of new space enters the market by 2013.
- **HOTEL SECTOR:** The hotel sector is currently in balance but is expected to move into an oversupply scenario, with a total of 26,500 rooms expected by 2013, compared to a demand for 19,700 rooms.

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# 1 Introduction

## 1.1 Context, Aims & Objectives

Over the past five years, Abu Dhabi has witnessed strong economic development, with a growth rate averaging over 9% per year. Urban growth challenges, resulting from demographic and population shifts, need to be addressed in due time through the development a clear and transparent framework. The current global and regional economic conditions ask for governments and regulatory authorities to take a more active role in creating a framework that can rectify and solve real estate issues.

In rapidly changing global and local economic conditions, the Abu Dhabi Urban Planning Council (UPC) is committed to responding to the current urban growth challenges by developing a more transparent framework. This commitment is at the origin of the **Abu Dhabi Real Estate Forecast** with primary aim to follow the needs, challenges and opportunities of the real estate sector in Abu Dhabi. With the **Forecast**, the UPC contributes to the strengthening and more transparent regulatory environment.

The objectives of the **Abu Dhabi Real Estate Forecast** are:

- To ascertain the current balance between the supply and demand for real estate across four sectors of the Abu Dhabi metropolitan area (Office, Residential, Retail and Hotel);
- To assess how this balance is likely to change over the short term (2009 – 2013). This analysis of the short-term supply and demand is extracted from a more extensive supply and demand study, which covered the period from 2008 to 2030.;
- To allow the UPC to plan and implement its urban structure framework plans in accordance to key market indicators.

## 1.2 Scope of Project

There were two models developed under the purview of the present research effort.

### (i) Macroeconomic & Demographic Model

The Project Team has prepared a new top-down model to project both employment and population for the Abu Dhabi metropolitan area from 2008 to 2030. This model has been developed using published data together with extensive primary data collection.

The main characteristics and assumptions of the model are as follows:

- Non-oil GDP by sector increases in line with world demand, capacity and, in some cases, domestic intermediate demand and population.
- Nominal investment demand depends on nominal GDP and is therefore sensitive to the oil price.
- Employment growth is related to real GDP growth.

- Non-citizens (expatriate) population is equal to non-citizens employment plus non-employed non-citizens. The latter is assumed to move in line with the number of employed non-citizens. Therefore, there is a strong relationship between employment growth and population growth.
- Tourist nights grow in line with world demand, along with the improved tourism offer and increased capacity in Abu Dhabi
- Retail spending is the sum of spending by residents and tourists. Residents spending increases in line with residents' incomes and tourist spending is linked to tourist nights.

The following outputs of the Model form key inputs into the real estate supply and demand model developed for this project.

- Population (expatriates and nationals) - residential market
- Office-based employment – office market
- Retail sales (residents and tourists) – retail market
- Hotel night demand (tourists) – hotel market

#### ( ii ) Real Estate Supply & Demand Model

The Project Team has also prepared a new Real Estate Supply & Demand model for the Abu Dhabi metropolitan area for the period from 2008 -2030, including a shorter term analysis for the period 2009 to 2013 as covered by this report.

**Supply:** A detailed assessment of the potential future supply of real estate in Abu Dhabi has been undertaken. Projections of future supply from 2009 to 2013 are based on a detailed 'project by project' review of all announced projects, making adjustments to reflect the likely delivery dates and phasing of these projects.

The projected supply was broken down into a total of 30 areas in the research study. For the purpose of this summary report, these have been grouped together into the following 6 broader regions.



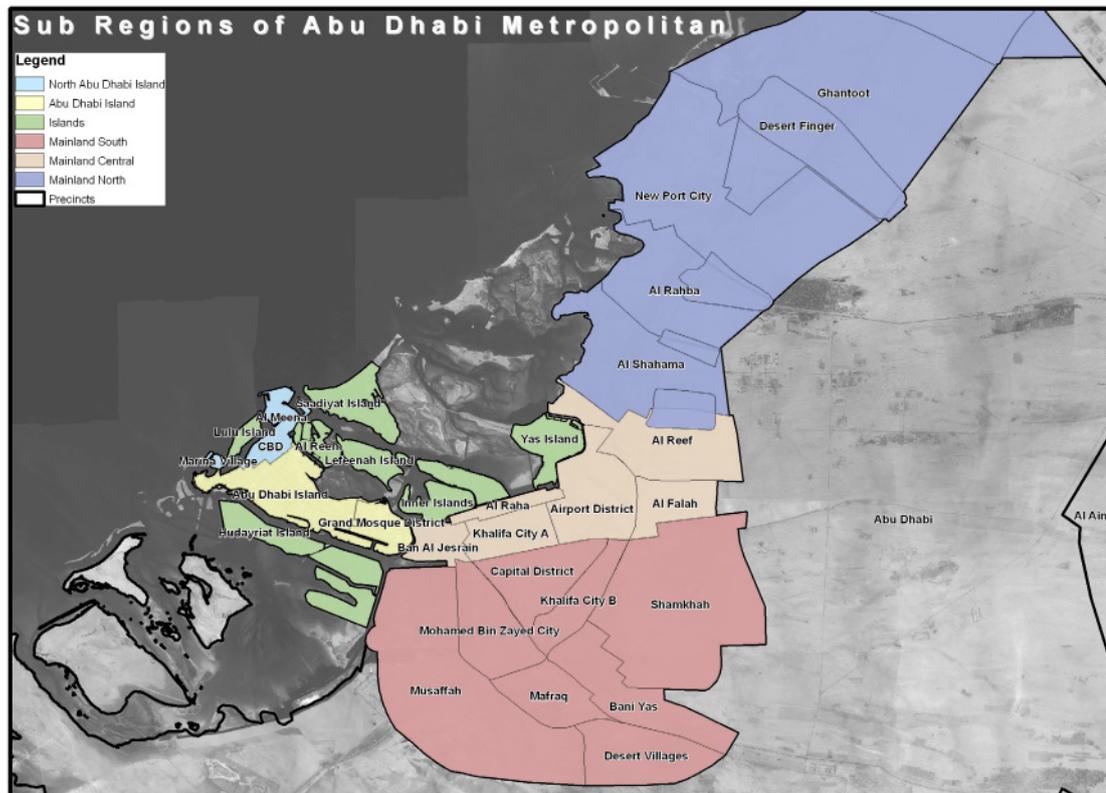
**Allocation of Supply by Region**

Mainland North	Abu Dhabi Island	North Abu Dhabi Island
Al Shahama	Abu Dhabi Island	Al Meena
Al Rahba	Grand Mosque District	CBD
New Port City		Marina Village
Ghantoot + Desert Finger		

Mainland South	Mainland Central	Islands
Shamkhah	Al Falah	Al Reem
Capital District	Khalifa City A	Al Suwwah
Bani Yas	Airport District + Al Reef	Lulu Island
Desert Villages	Bain Al Jesrain	Inner Islands
MBZ City	Al Raha	Yas Island
Mussafah		Saadiyat Island
Maffraq		Lefeenah Island
Khalifa City B		Hudaryiat Island

Source: Project Team



Source: Project Team. UPC (GIS department)

**Demand:** Based on the outputs of the Macroeconomic & Demographic model, annual forecasts of demand for each of the four asset classes (residential, office, retail and hotels) have been prepared from 2009 to 2013

## 2 Macroeconomic & Demographic Forecasts

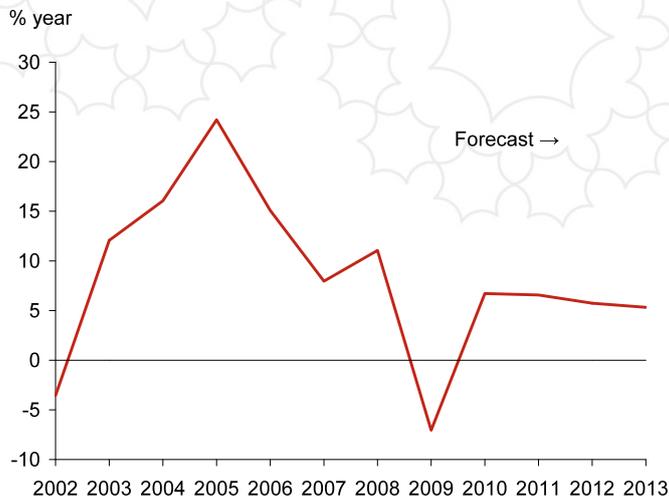
### 2.1 Headline Forecasts – Abu Dhabi Emirate

Abu Dhabi is by far the largest of the seven emirates of the United Arab Emirates (UAE) both in terms of land area and in terms of economic activity, accounting for over 50% of total UAE GDP (though only a third of non-oil GDP).

The discovery of oil in the 1960s has transformed the economy of the United Arab Emirates over the past 50 years with the Emirates' massive oil based revenues being progressively re-invested into diversification with a particular focus on healthcare, education, industry and infrastructure. While there are ambitious plans to diversify towards the non-oil sector of the economy, the non-oil sector accounted for only 38% of total GDP in 2008. The Economic Vision 2030 is the long-term plan of the Government of Abu Dhabi for the diversification of the Emirate's economy and its transformation into a sustainable economy.

In the last decade, Abu Dhabi has grown at an exceptional pace. Between 2001 and 2009, the total GDP growth averaged 9% per annum in real terms<sup>1</sup>, dominated by the rapid growth in the oil and gas sector. Over the same period (2001-2009), non-oil GDP grew at an average of 3.6% each year. With growth in the oil sector outstripping the rest of the economy and with rising oil prices, the non-oil share of the economy declined rapidly until 2008.

#### Real GDP Growth (2002-2013) – Abu Dhabi Emirate



Source: Macroeconomic & Demographic Model (based on nominal GDP historic data (2002 – 2008) from Ministry of Economy)

In 2009, the economy was hit by the impact of falling oil prices and output, a decline in real estate markets, the lack of bank lending and diminishing economic confidence. The combination of these factors more than offset any fiscal and monetary stimulus, resulting in a decline of 7% in real GDP for Abu Dhabi in 2009.

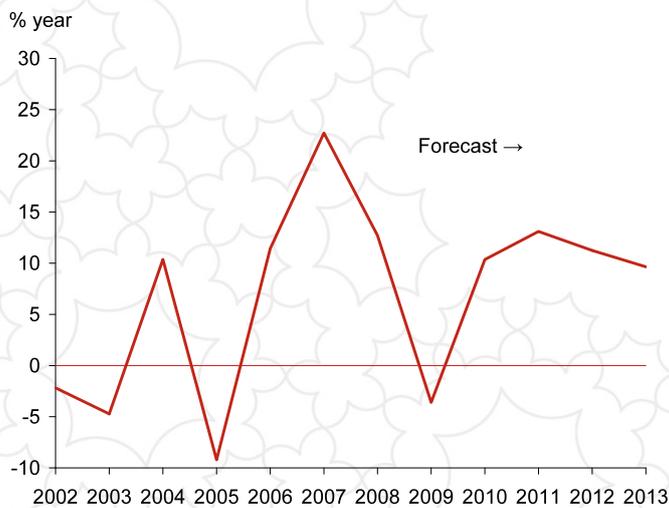
<sup>1</sup> All growth rates are quoted in real terms (adjusted for inflation) while all GDP shares are in nominal terms unless otherwise stated.

Despite continued weakness in the global economy in the first half of 2010, the Abu Dhabi economy is predicted to rebound strongly, with a positive real growth of GDP of 6.7% forecasted for this year.

Total real GDP is envisaged to increase by an average of 6.1% per annum between 2009 and 2013. Although non-oil GDP growth is expected to out-strip growth in the oil sector as the economy diversifies, the easing of production quotas allowing a recovery in oil production will ensure that the oil sector continues to dominate the economy (accounting for 66% of total real GDP in 2013).

Investment has been skewed towards non-oil sectors in recent years. Gross fixed domestic capital formation increased by an average of 3.5% per annum between 2001 and 2008, driven by investment in the real estate and business services sector which averaged an impressive growth of 14.4% per annum.

#### Total Real Investment Growth (2002-2013) – Abu Dhabi Emirate



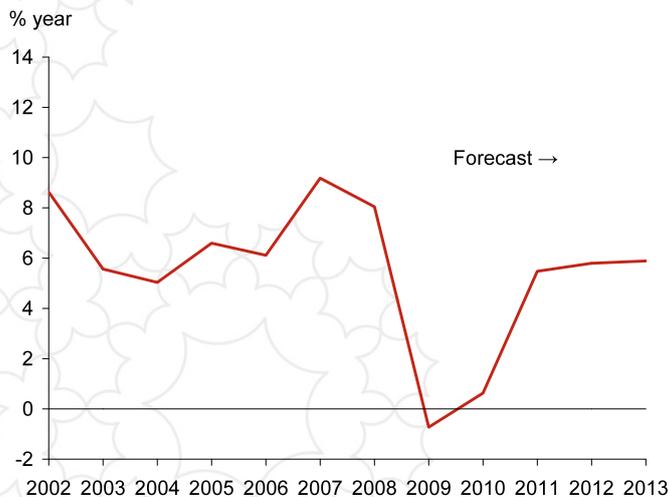
Source: Macroeconomic & Demographic Model (based on historic data (2002 – 2008) from Statistics Centre Abu Dhabi)

Investment is expected to bounce back following a decline in 2009 and is expected to post double digit average annual growth rates over the four years to 2013.

As the economy has expanded briskly in recent years, so has employment. Between 2001 and 2009, total employment increased by an average of 6.0% per annum. Over the same time, employment in construction has increased by over 10% per annum, and by 2009 26% of the employed workforce was in this sector although this was down from nearly 29% in 2008.



## Total Employment Growth (2002 – 2013)



Source: Macroeconomic & Demographic Model (based on historic data (2002 – 2008) from Statistics Centre Abu Dhabi)

## 2.2 Key Sectors

Abu Dhabi is the largest oil producer in the UAE, controlling more than 85% of the UAE's total oil output capacity and over 90% of its crude reserves – equivalent to over 8% of the world's oil reserves. It is therefore not surprising that oil and gas production has been the mainstay of the economy and it is anticipated to remain a major contributor to the GDP, due to the vast hydrocarbon reserves at the Emirate's disposal.

As the world economy recovers, trends in the oil price will be supportive of relatively strong growth from next year, and will assist to increase the share of the oil sector in nominal terms in the short term. Oil prices are expected to grow to an average of USD 74 per barrel in 2010, a 22% increase from the USD 61 per barrel figure for 2009 (which was a drop of 37% from 2008).

The rise in employment in the services sectors will drive demand for office space. The number of office workers is forecast to increase by 4.5% per annum between 2009 and 2013. Hotels and restaurants are expected to witness the most rapid rise in employment (over 8% per annum) as this sector benefits from the projected growth in visitor arrivals.

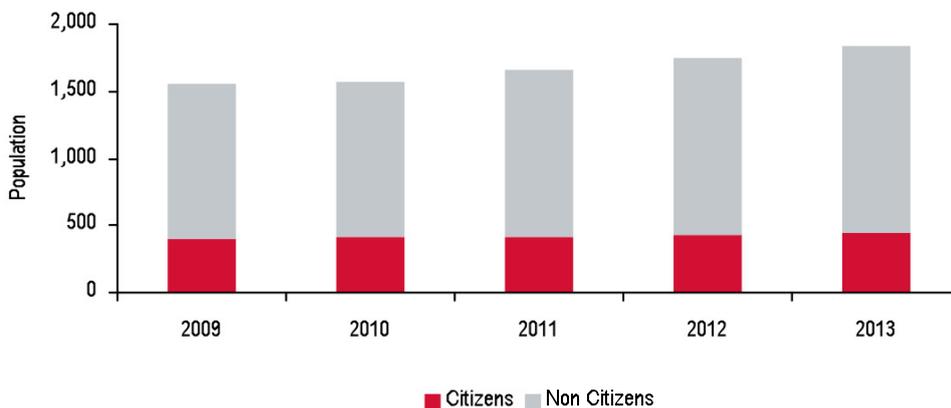
## 2.3 Demographic Characteristics

Population growth in Abu Dhabi reflects a mixture of the natural increase in the citizen's population and the expansion of the non-citizen (or expatriate) population in response to changing employment opportunities.

Abu Dhabi's citizen population has increased at a steady pace, growing by around 4% per annum between 2001 and 2009. Having seen higher natural growth rates in the 1990's the composition of the citizen population in 2009 was dominated by the under-15 category (which accounted for 42% of the total population), while the working age population (15-64 year olds) accounted for 55% of the total. This age mix and a relatively high birth rate will drive the projected growth of the citizen population (above 3% per annum) between 2009 and 2013.

However, growth in the citizen population has been, and will continue to be, outstripped by the increase in the expatriate (non-citizens) population of Abu Dhabi. Between 2001 and 2009, the non-citizen population is estimated to have grown by an average of almost 4% per annum despite a fall in 2009 as a result of the recent economic downturn. The previous growth rate is expected to be maintained between 2009 and 2013. This will lead to the number of expatriates rising from 1.2 million in 2009 to 1.4 million in 2013.

#### Total Population (citizen & non citizen) 2009 - 2013 (Abu Dhabi Emirate)



Source: Macroeconomic & Demographic Model

A critical demographic driver for non citizen population in Abu Dhabi is the ratio of dependents per employed person, which currently stands at a 0.31. This relatively low figure is due to a large number of single workers with no dependents in the Emirate and the absence of a large number of retired expatriates.

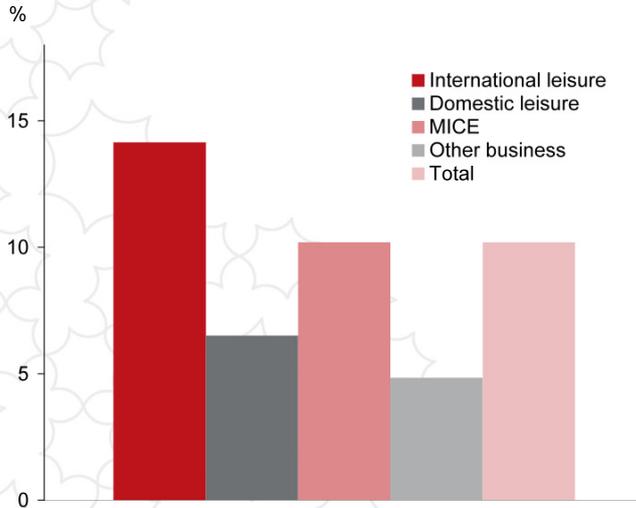
There is scope for an increase in the ratio of dependents per employed person as the relative importance of the more transient construction workers diminishes and as the expatriate community becomes generally more prosperous and more settled. Consequently, it is assumed that the non-employed to employed ratio for expatriates will increase gradually in the future, further contributing to the growth in the total expatriate population.

## 2.4 Tourism

There has been a concerted effort by the Abu Dhabi authorities to boost tourism in recent years, with measures including government training schemes to improve the quality of services in the hotel industry, a prominent marketing campaign, the establishment of Abu Dhabi Tourism Authority (ADTA), the development of major new tourist attractions and the hosting of a range of sporting and cultural events. As part of its strategic diversification, the Emirate is targeting the luxury tourism market, and has put art and culture at the heart of its economic plans, with projects including the development of a number of landmark attractions such as the new Louvre and Guggenheim museums.

As a result of these initiatives, the total number of visitors in Abu Dhabi is forecast to increase from 1.5 million in 2009 to more than 2.1 million by 2013 (an increase of around 10% per annum). International leisure would be the fastest growing market segment, with an anticipated increase from 500,000 visitors in 2009 to more than 832,000 visitors in 2013 (an increase of almost 17% per annum).

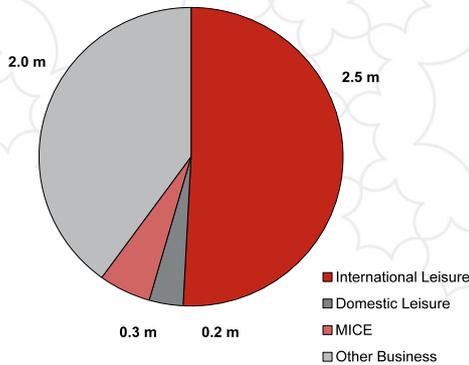
**Growth in Visitors Arrivals (2009 – 2013) Abu Dhabi Emirate**



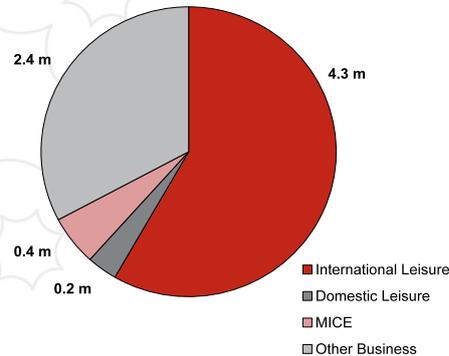
Source: Macroeconomic & Demographic Model

As a result of the robust growth in international leisure visitors, it is anticipated that the share of international leisure hotel nights will rise from 51% (2.5 million visitor nights) in 2008 to 58% (4.3 million visitors) by 2013.

**Hotel Nights by Purpose 2009**



**Hotel Nights by Purpose 2013**



Source: Macroeconomic & Demographic Model (data relates to Abu Dhabi Emirate)

A consequence of the rise in visitors, particularly leisure visitors, will be increased demand for hotels and restaurants and for the retail sector, all of which are expected to see above average employment growth over the next four years.

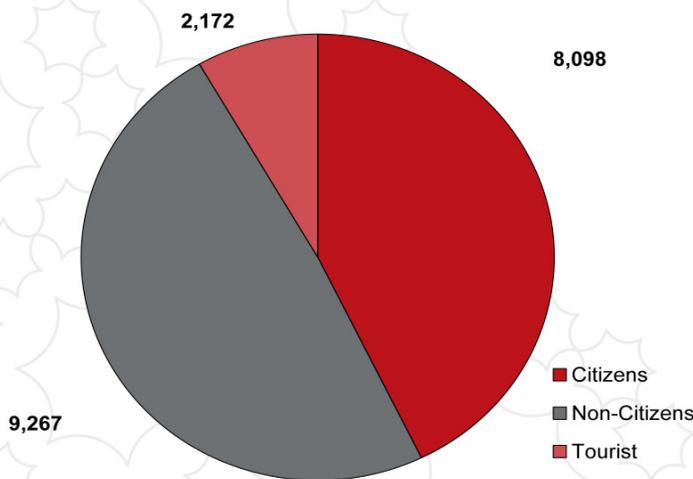
**2.5 Incomes and Spending**

Total household income in Abu Dhabi in 2009 is estimated at AED76 billion (AED27 billion for citizens and AED49 billion for non-citizen households), with wages and salaries being the main source of income. Employment generated income for non-citizens is around 2.4 times that of citizens, with citizens being relatively more reliant on property income and transfers.

While the aggregate income of non-citizen households did not experience growth during 2009, employment and earnings prospects are expected to improve again from 2010. This is predicted to result in real aggregate household incomes for non-citizens increasing by an average of over 6% per annum between 2009 and 2013.

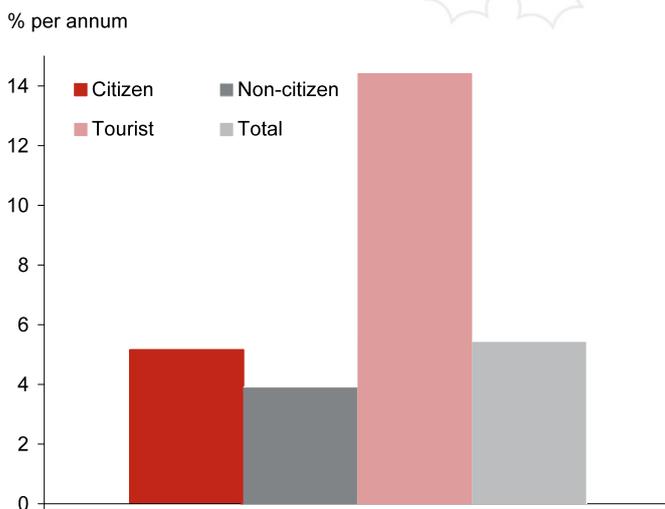
Retail spending in Abu Dhabi Emirate is expected to equal AED18.9 billion (in 2008 prices) in 2009. Expatriate residents comprise the largest share of this total (49%), compared with 43% of retail spending from citizens and the remaining 8% of this total spend derived from tourists. Although non-citizen total household incomes far outweighs that of citizens, non citizens spend a much lower proportion of their income on retail purchases than citizens (18% compared to 30%) which reflects a higher savings rate by non-citizens and a much higher proportion of expatriates' income being spent on accommodation or sent abroad.

**Retail Spend by Group (2009) AED Bn (Abu Dhabi Emirate)**



Source: Macroeconomic & Demographic Model

**Growth of Retail Spending by Group (2009-13) Abu Dhabi Emirate**



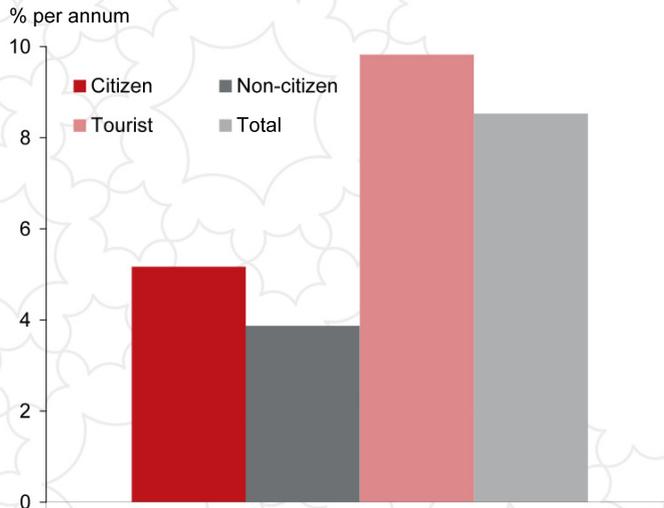
Source: Macroeconomic & Demographic Model

Retail spending by citizens and expatriate residents is expected to grow in line with income between 2009 and 2013. Much stronger growth is expected in retail spending by tourists, reflecting both the increased visitor

nights and increased spending per night. Overall, retail spending by residents is forecasted to increase at an average annual rate of 4.5% per annum between 2009 and 2013, while the average increase in tourists' retail spending of 14.4% per annum will push the aggregate growth rate of retail spending up to 5.4% per annum.

Spending on hotels and restaurants is heavily dependent on tourism, which accounts for around 75% of total spending. Driven by the strong growth in tourist arrivals, aggregate spending on hotels and restaurants is forecast to increase by a very robust 8.5% per annum from 2009 to 2013.

#### Growth in Hotel and Restaurant Spending (2009-2013) – Abu Dhabi Emirate



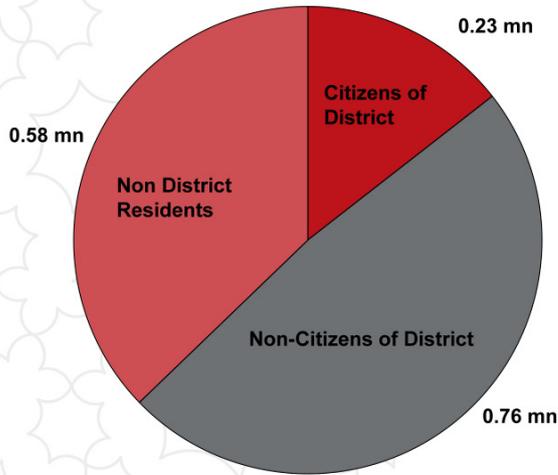
Source: Macroeconomic & Demographic Model

## 2.6 Study Findings for Abu Dhabi Metropolitan Area

The population of the Abu Dhabi metropolitan area is perceived to be 969,000 or around 60% of the Abu Dhabi Emirate population at the end of 2009. There is a greater concentration of expatriates in the Abu Dhabi Metropolitan (which accounts for around 65% of all the expatriates living in the Emirate) while over half of all the Emirates reside within the Abu Dhabi metropolitan area.

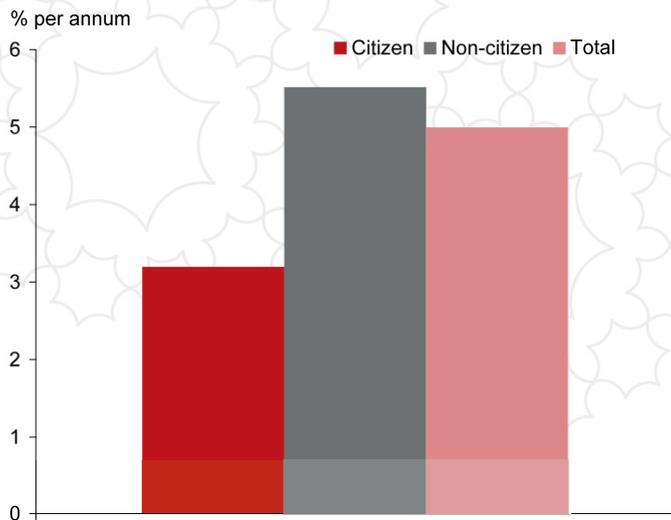
After flattening off in 2009 as a result of the economic slowdown, the non-citizens population is forecast to grow at a solid pace of 5.7% per annum between 2009 and 2013. Combined with the projected increase of 3.4% in the citizen population, the total population of the Abu Dhabi metropolitan area is forecast to increase by 5% per annum between 2009 and 2013.

### Composition of Abu Dhabi Emirate Population (2009)



Source: Macroeconomic & Demographic Model

### Abu Dhabi Metropolitan Area Population Change 2009-2013



Source: Macroeconomic & Demographic Model

The Abu Dhabi metropolitan area accounted for 59% of the Emirates total employment in 2009. The construction and distribution (including retail) sectors were the largest employers, constituting 29% and 21% of total employment in the Metropolitan respectively in 2009.

The global economic downturn resulted in a contraction in employment in those sectors sensitive to the external environment in 2009 included the oil, manufacturing, finance and construction sectors. Most sectors are expected to rebound strongly from 2010 and total employment is forecast to post an average growth of 4.8% per annum between 2009 and 2013. The strongest growing sectors between 2009 and 2013 are forecast to be restaurants and hotels (8.4%), real estate and business services (8.0%), construction (6.0%), distribution (5%) and financial services (5%).

Over 65% of all office jobs in Abu Dhabi Emirate are located in the Metropolitan area. This ratio is even higher in many sectors of the economy (e.g. 90% of all office jobs in the finance sector in Abu Dhabi Emirate are located in the metropolitan area). Office-based jobs are expected to grow at a slightly slower rate of growth

than total employment between 2009 and 2013 as the rapidly growing construction, hotels and restaurants and distribution sectors have a considerably smaller proportion of office based staff.

## 3 Residential Market

### 3.1 Introduction

The Abu Dhabi residential market is currently experiencing a shortage of supply, with insufficient units to meet the demands of the current population particularly for the lower income brackets. This has resulted in a significant degree of sharing of housing units, in the form of both shared villas and multiple family occupancy of apartments.

While the construction industry has responded to the current shortage with the announcement of many new projects over the past 2 to 3 years, much of this announced supply has been delayed or placed on hold due to the effects of the market downturn, the tightening of liquidity and developers being previously overly reliant on pre-sales for fund development.

The residential market is expected to remain undersupplied throughout the study period, although the current shortage of around 48,400 units is expected to reduce to around 26,300 units by 2013.

The recent speculative boom saw residential sales prices peak in 2008, before declining dramatically in 2009. The rental market has also seen rents adjust downwards in 2009 across almost all sub sectors particularly for lower grade and upper market product, although rents still remain relatively high compared to neighbouring Dubai, due to the continued shortage of supply.

Residential rents might continue to decline in Abu Dhabi, due to a number of factors including the impact of rent decline in Dubai and increasing supply. This adjustment in Abu Dhabi rentals will be a key to unlocking the current latent demand owing to a reduction in the propensity for multiple households to share a single residential unit. As Abu Dhabi's rental premium over Dubai residential rentals reduces then the level of commuting from Dubai to Abu Dhabi will reduce, further unlocking latent demand.

With more new supply becoming available and as rents decline, residential tenants will have more choice. As a result, many tenants are expected to trade-up from shared accommodation into single occupancy units, creating a price driven increase in demand.

There remains a mismatch between the positioning of the current supply (much of which was planned to target speculators and higher end product) and the majority of end user demand (which is greatest in the lower and mid market segments).

While many developers are currently reviewing and re-positioning their project pipeline to increase the supply of lower and mid market product for end users, there is expected to be a continued shortage of lower and mid-market housing stock for the next three to four years.

The upscale market will witness significant levels of additional new supply in 2010 and 2011, with the completion of the first projects at Reem Island and Raha Beach.

### 3.2 Current Residential Supply

As of 2009, the total stock of residential units across Abu Dhabi is approximately 177,400 units. The residential market is currently under-supplied with prime locations commanding very high rents and operating at nearly 100% occupancy, with many families sharing apartments and villas that were originally designed for single family occupancy.

The majority of recent additions to supply have been delivered off Abu Dhabi Island. Higher quality additions to housing stock have included Raha Gardens, Sas Al Nakl and Golf Gardens. A range of non-masterplanned developments targeting the middle market have taken place in locations such as Khalifa City A, Mohammed Bin Zayed City and Mafraq. These areas have also witnessed the conversion of single villas into multiple apartments. Given the shortage of mid-market accommodation on Abu Dhabi Island, many residents have had little option but to relocate to these secondary locations outside of Abu Dhabi Island.

### 3.3 Future Residential Supply

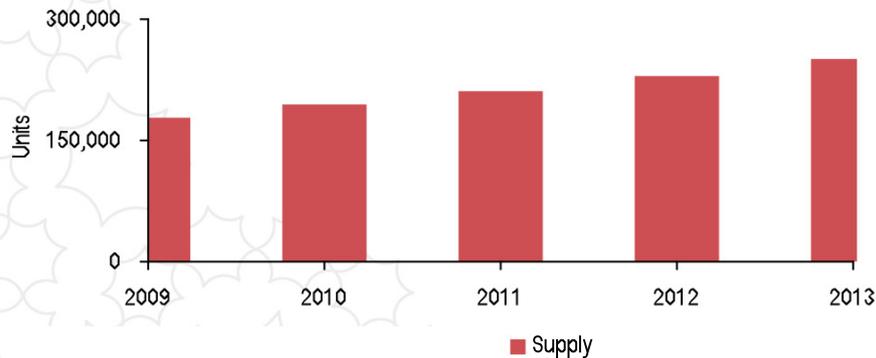
The delay of many of the announced residential projects in Abu Dhabi has mitigated the potential over-supply which would otherwise have occurred in 2012/2013. As a result of many projects being delayed or placed on hold, additions to supply will be relatively modest from 2010 to 2013 compared to developer announcements.

A large amount of the immediate residential pipeline is focussed on new masterplanned areas such as Saadiyat Island, Reem Island, Raha Beach, Danet, Rawdhat, and the landmark development on or near the Corniche such as Etihad Towers, Central Market, Nation Towers, The Landmark and Capital Plaza. With the exception of Raha Beach and its vicinity, the mainland will generally offer a more mid-market / low-rise alternative targeted at families and Emiratis in individual non-masterplanned developments within areas such as Khalifa City A, Mohammed Bin Zayed City, Baniyas, Shamkha and the North Coast.

Based upon detailed 'project by project' discussions between the Project Team and developers, the current supply is expected to increase to 251,200 units by the end of 2013 - an increase of 73,800 units or 41.6% over the existing supply. The year-on-year breakdown of this new supply is shown in the following graph, with the geographical distribution of the new supply indicated in the following table.



### Future Residential Supply (number of units) 2009-2013



	2009	2010	2011	2012	2013
Total (yearly upcoming supply)	5,916	16,584	16,147	18,486	22,595
<b>Total Supply (units)</b>	<b>177,416</b>	<b>194,000</b>	<b>210,147</b>	<b>228,633</b>	<b>251,228</b>

Source: Real Estate Supply and Demand Model based on discussions with UPC and developers

### Residential Supply (units) by Area (2009-2013)

	2008	2009	2010	2011	2012	2013
Mainland North		250	500	500	482	840
AD Island		940	1,498	4,162	2,110	1,463
North AD Island		600	605	650	1,319	150
Mainland South		1,318	2,309	2,885	2,801	2,913
Mainland Central		2,270	4,083	6,481	5,694	<b>5,818</b>
Islands		-	6,081	-	4,400	9,357
@10% of Supply Addition (Beyond UPC Purview)		538	1,508	1,469	1,680	2,054
Total (yearly upcoming supply)		5,916	16,584	16,147	18,486	22,595
<b>Total Supply (units)</b>	<b>171,500</b>	<b>177,416</b>	<b>194,000</b>	<b>210,147</b>	<b>228,633</b>	<b>251,228</b>

Source: Real Estate Supply and Demand Model based on discussions with UPC and developers

## 3.4 Current Residential Demand

Rapid economic growth and employment creation has resulted in an unprecedented population boom in Abu Dhabi in recent years. While the resident population of the Abu Dhabi metropolitan area (969,000 in 2009) remains low compared to other prominent regional and global cities, the population has been increasing at a relatively rapid rate (4% pa between 2001 and 2009).

The average household size in Abu Dhabi is estimated to be 4.3 (based on averages of 3.5 for expats and 6.5 for nationals). This results in demand for around 226,000 units in Abu Dhabi metropolitan area. Given the number of households exceeds the total supply; there is currently more than one household per unit across Abu Dhabi. This has resulted in the multi occupancy of villas (with many single family villas being converted into shared accommodation) and the situation where several families are currently sharing a single apartment.

### 3.5 Future Residential Demand

There are three major drivers to the potential future demand for residential units in Abu Dhabi:

- Total population
- Average household size
- Propensity to share ratio

Based on these factors, the total demand for residential units is forecast to reach 278,000 by 2013 – an increase of approximately 52,000 units from 2009. This figure is still higher than the anticipated supply by 2013, which is forecast at 250,700 units, illustrating a deficit of approximately 26,300 units.

### 3.6 Residential Market Outlook

The residential sector for end-users is currently under-supplied particularly for lower and mid market income brackets. Whilst there was a large amount of residential product launched in the boom years of 2007 to 2008, the majority of this space targeted speculative investors rather than end-users and many of these projects have since been put on hold.

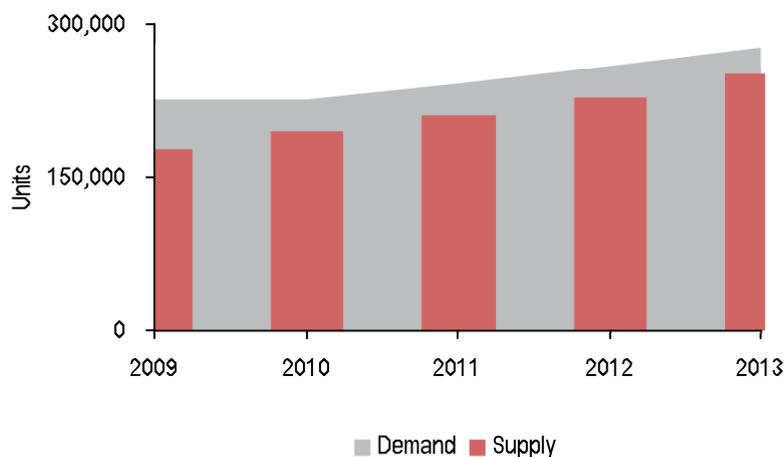
Given the limited new supply that will actually materialise over the next few years and the additional demand that is expected to be realised as rents decline, the residential market is expected to remain undersupplied between 2009 and 2013.

#### Balance of Residential Supply/Demand 2009-2013

	2009	2010	2011	2012	2013
Supply (units)	177,416	194,000	210,147	228,633	251,228
Demand (units)	225,837	226,159	241,937	259,143	277,516
Balance (units)	-48,421	-32,159	-31,790	-30,510	-26,288

Source: Real Estate Supply & Demand Model (based on inputs from UPC for supply and Macroeconomic & Demographic Model for demand)

#### Residential Supply & Demand Analysis (2009-2013)



Source: Real Estate Supply & Demand Model (based on inputs from UPC for supply and Macroeconomic & Demographic Model for demand)

## 4 Office Market

### 4.1 Introduction

Currently there is a limited supply of office space in Abu Dhabi, particularly for international quality, professionally managed Grade A office space. As a result, the office markets are operating at maximum occupancy rates and rents are high in relation to the quality of space offered and compared to other regional markets. Many tenants have adjusted to these tight market conditions by:

- Functioning out of villas or other buildings originally designed for residential purposes;
- Operating at unsustainably high space densities;
- Maintaining a relatively minor presence in Abu Dhabi, while servicing the market from other cities in the region.

The supply situation is poised to change significantly over the next 4 years, with significant levels of new supply coming on line. The current shortage of space is, therefore, likely to be addressed and a more balanced situation is likely to emerge over the period to 2013.

Rental values peaked in early 2009 and are now falling due to upcoming supply. Many existing tenants that have been present in Abu Dhabi for a number of years are benefiting from historic rent caps and are therefore not inclined to move and the comparatively high costs of doing business in Abu Dhabi are constraining the level of new entrants to the market.

As more office space becomes available, average rents are expected to decline, which in turn will help to stimulate market absorption rates in a flight to quality, as tenants relocate to occupy higher quality product at a similar cost. As a result, poorer quality space will face severe vacancies and rental declines, with residential conversions reverting to residential usage.

Demand is currently focused on large scale requirements from the government, state-owned enterprises and domestic banks, with most of these sectors being typically owner occupiers rather than being active in the private rental market.

With the exception of a few foreign companies involved in the oil and gas and financial services sectors, professional services is the most active private sector. However, most requirements remain relatively small, with many firms choosing to operate satellite offices in Abu Dhabi.

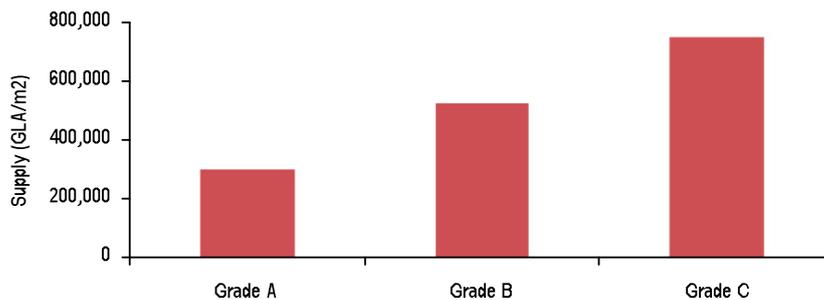
### 4.2 Current Office Supply

Abu Dhabi's office market is currently substantially under-developed in terms of both the quantity and quality of space for a city of its size and economic importance. There are only a few buildings that offer international quality Grade A quality space (e.g.: ADIA, Al Mamoura, Aldar's HQ, Baniyas Towers) and these buildings are typically occupied by government-related groups and are not easily available to private sector tenants.

Abu Dhabi had a total office stock of approximately 1.8 million sqm floor space (Grade A,B &C), as at the end of 2009, with an even more limited stock of around 298,000 sqm of Grade A space. This is an extremely low level of office space per capita, just 1.9 sq.m of space per person, (compared to nearly 3.0 sqm per capita in Dubai).

In addition to this stock, there is approximately 160,000 sqm of Grade D buildings, which are mainly poor quality residential conversions. These include buildings with mezzanine office space or a limited number of office floors in primarily residential towers, public buildings which were originally constructed for public sector usage and villas currently being utilised for office purposes.

#### Existing Office Stock by Grade



Source: The Project Team

The majority of the current supply of quality office space is located on Abu Dhabi Island, where a number of principal office districts can be identified. These include:-

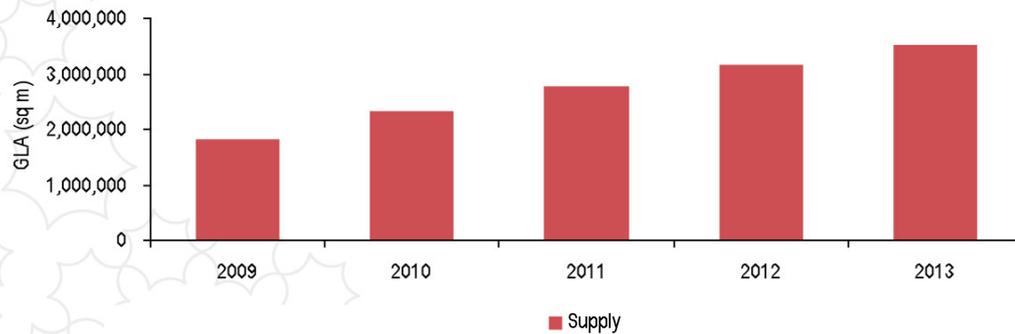
- **Central Business District** – focused on the area surrounding Hamdan Street and extending to surrounding areas along the Corniche, within the Tourist Club Area and to Al Dhafrah. This area has a current stock of approximately 800,000 sqm.
- **Midtown** largely comprising Airport Road and Muroor Road corridors – a large number of Grade B/C buildings, often residential conversions. This area also includes the prime Al Mamoura complex, which has attracted occupiers seeking to be close to major government entities such as Mubadala, Executive Affairs Authority and the UPC. The total stock in this area is around 550,000 sqm.
- Other current submarkets on Abu Dhabi Island such as Al Bateen and Khalifa Park, where there are a limited number of modern office buildings. Most of the stock in these areas comprises clusters of grade B/C buildings (reasonable quality, albeit residential conversions) which have attracted professional services and investment firms and public sector groups due to the current absence of higher quality stock.

Outside of the Abu Dhabi Island, the most significant current stock of office space is located in the Mussafah area, which is estimated to provide around 200,000 sqm of office premises, and Raha where Aldar have developed their new HQ building.

### 4.3 Future Office Supply

Based upon the detailed (risk-adjusted project by project) analysis of future supply undertaken by the Project Team, it is estimated that the total supply of office space across the Abu Dhabi metropolitan area will almost double from its current level of 1.8 million sqm to approximately 3.6 million sqm by the end of 2013. The following graph provides the annual supply estimates, with the geographic location of this new supply being highlighted in the table below.

### Future Office Supply –GLA (sqm) (2009 – 2013)



	2009	2010	2011	2012	2013
Total (yearly upcoming supply)	129,000	536,245	469,102	366,458	377,974
<b>Total Supply (units)</b>	<b>1,809,500</b>	<b>2,345,745</b>	<b>2,814,847</b>	<b>3,181,305</b>	<b>3,559,278</b>

Source: Real Estate Supply & Demand Model based on discussions with UPC and developers

### Office Supply (GLA/m<sup>2</sup>) by Location (2009-2013)

	2008	2009	2010	2011	2012	2013
Mainland North	-	-	-	-	1,030	-
AD Island	-	79,500	178,320	160,450	130,740	115,406
North AD Island	-	19,500	107,000	60,000	107,128	90,193
Mainland South	-	12,000	92,667	42,962	42,667	51,668
Mainland Central	-	18,000	53,500	21,500	74,894	45,307
Islands	-	-	104,758	184,190	10,000	75,400
<i>Total (yearly upcoming supply)</i>	-	129,000	536,245	469,102	366,458	377,974
<b>Total Supply (GLA/m<sup>2</sup>)</b>	<b>1,680,500</b>	<b>1,809,500</b>	<b>2,345,745</b>	<b>2,814,847</b>	<b>3,181,305</b>	<b>3,559,278</b>

Source: Real Estate Supply & Demand Model based on discussions with UPC and developers

While there are instances of projects being placed on hold due to recessionary effects, there remains a substantial amount of development in the pipeline. Major projects expected to be completed within the Corniche and Central Business District area over the next four years include Sowwah Square, Etihad Towers, Capital Plaza, Central Market, The Landmark Corniche and Nation Towers.

The boundaries of the CBD are being extended outside of Abu Dhabi Island to include Al Sowwah Island (prime office development including the new Stock Exchange building), together with surrounding projects on Reem Island and at Mina Zayed.

The Grand Mosque District and surrounding area will also offer new office supply over the next four years upon the completion of the first phases of the major master developments at the Capital Centre (adjacent to ADNEC), Danet and Rawdhat.

There will also be a limited amount of Grade A office space being completed on the mainland over the next few years, following Aldar's HQ building at Raha Beach. Examples include TDIC/ADTA's HQ building and Masdar City.

#### 4.4 Current Office Demand

Abu Dhabi's office market is currently dominated by large-scale state-owned enterprises (such as Etihad Etisalat, ADWEA, ADNOC), the domestic banking sector (e.g. National Bank of Abu Dhabi, Abu Dhabi Commercial Bank, Abu Dhabi Islamic Bank, First Gulf Bank) and federal and local government entities.

Beyond the large-scale entities, office occupiers are typically small-scale, with most being found in the oil-and gas industry and the professional services sector. These users predominantly occupy units under 1,000 sqm with only a small number of occupiers in excess of over 5,000 sqm.

Aside from larger scale government-backed entities, the majority of private sector lettings over the past 12 to 24 months have been to companies in sectors such as professional services (law firms, management consultants, architects, engineers etc.), with the typical floor space requirements of occupiers being relatively small (typically 100-500 sqm).

Due to a combination of the low vacancy rates, the relatively high market rents and the limited amount of modern space available, there is currently limited turnover (churn) of office tenants, with most companies tending to remain in their current lower grade space on short-term commitments rather than to relocate.

Given the shortage of available space, many companies are currently operating from unusually low levels of office space per employee, with surveys suggesting this currently ranges from 7 – 10 sqm per person in private sector organisations in Abu Dhabi. This is well below the typical occupancy standards seen overseas, which currently range from 12 – 22 sqm per employee. For estimating latent demand, an international best practice average of 15 sq.m per person has been assumed. Applying this assumption, results in a current demand of around 2.9 million sqm across the Abu Dhabi metropolitan area.

This suggests that the lack of competitively priced and good quality office space is artificially constraining the demand for office space, and resulting in about 1.1 million sqm of deficit for office space in Abu Dhabi.

#### 4.5 Future Office Demand

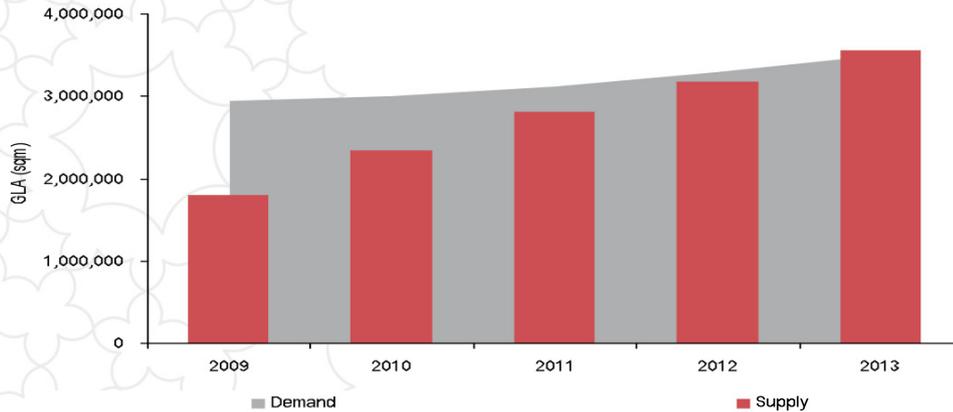
With employment in office based industries increasing and enhanced availability of office space, demand for office space in Abu Dhabi is expected to increase to around 3.5 million sqm by the end of 2013. Some of the demand for new space will be generated by existing occupiers upgrading their office space but the majority of new office space will need to be occupied by new demand from companies expanding their Abu Dhabi base and new entrants to the Abu Dhabi market.

The major sectors that will drive office demand from 2009 – 2013 will be financial services, professional services (lawyers, accountants, and consultants), corporate HQs (dominant sectors such as oil and gas, consumer goods, IT and Communications), real estate development (construction, developers and consultants) and most significantly the government sector. The dominant office occupiers will continue to be government and state-owned enterprises.

## 4.6 Office Market Outlook

The supply for office space will increase at a faster rate than the demand. This differential in the growth rate over the short term would allow for addressing the existing deficit of approximately 1.1 million sqm as well as for emerging demand in the future. As a result, the Abu Dhabi Markets would achieve supply-demand equilibrium by 2013. The occupancy rates are expected to be high during the period 2009 – 2013.

### Office Supply & Demand Analysis (2009 – 2013)



Source: Real Estate Supply & Demand Model (based on inputs from UPC for supply and Macroeconomic & Demographic Model for demand)

### Office Supply/Demand Analysis 2009-2013

	2009	2010	2011	2012	2013
Supply (GLA sqm)	1,809,500	2,345,745	2,814,847	3,181,305	3,559,273
Demand (GLA sqm)	2,940,339	2,997,463	3,127,192	3,296,864	3,495,464
Balance (GLA sqm)	-1,130,839	-651,718	-312,345	-115,558	+63,810

Source: Real Estate Supply & Demand Model (based on inputs from UPC for supply and Macroeconomic & Demographic Model for demand)



## 5 Retail Market

### 5.1 Introduction

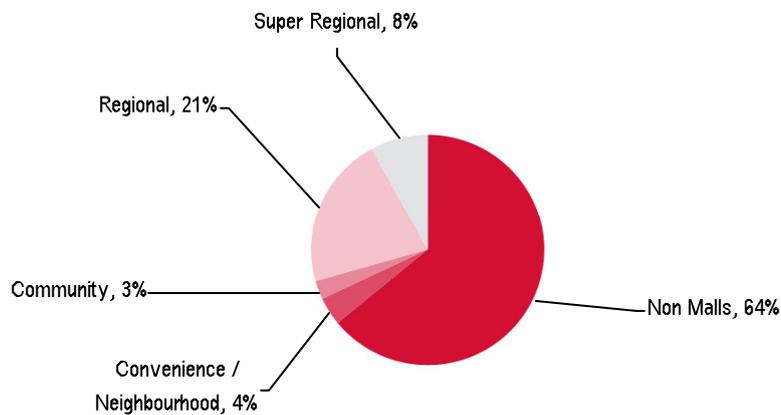
The retail market has many of the same characteristics as the office market in Abu Dhabi. These include a current shortage of international quality projects and an undersupply of retail floor space relative to the potential demand. As with the office market, the current lack of retail space has resulted in a loss of spending for Abu Dhabi, with some residents opting to travel to other major regional and global cities.

Increased spending by both residents and tourists, combined with the existing below average per capita provision of retail space, will provide a favourable outlook for the Abu Dhabi retail sector over the next four years.

### 5.2 Current Retail Supply

The total retail supply in Abu Dhabi equates to approximately 1.4 million sq.m of GLA. A distinctive characteristic of the Abu Dhabi market is that the majority of this space is in non mall retail formats (e.g. street shops); with only 36% of the total GLA being in enclosed malls or shopping centres, of which Marina Mall and Abu Dhabi Mall are the largest.

#### Breakdown of Retail by Type (2009)



Source: Project Team Analysis



### Retail Type, Area & Required Supporting Population

Type of Centre	Range of GLA (m2)	Minimum Support Population Required
Convenience	Less than 3,000	< 5,000
Neighbourhood	3,000-10,000	5,000-40,000
Community	10,000-30,000	40,000-150,000
Regional	30,000-90,000	150,000+
Super Regional	50,000-150,000	300,000+

Source: The Project Team based upon retail classification by the Urban Land Institute

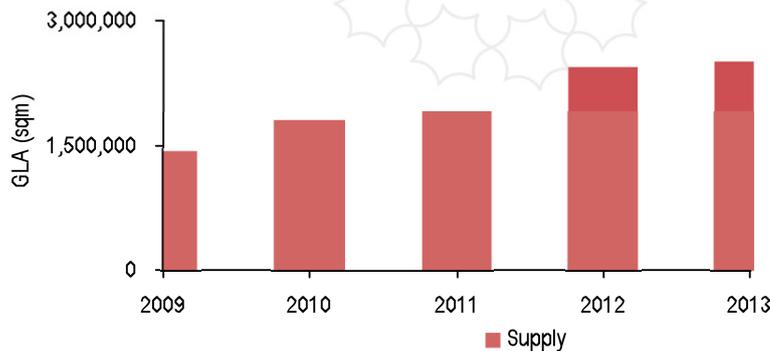
There is a significant shortage of available retail space including high end street retail at present and the existing shopping malls are currently experiencing high occupancy rates (above 95%). There is also a waiting list for retail space within many of the existing malls, which is an indication of the lack of options available to retailers in the current market.

### 5.3 Future Retail Supply

The present stock of 1.4 million sq.m (GLA) of retail space within the Abu Dhabi metropolitan area is poised to grow to around 1.9 million sqm by 2011 and 2.5 million sq.m by 2013 with the addition of a number of major new centres. The major additions to retail supply over the short term include the Yas Mall in Yas Island, Paragon Mall in Reem Island, the Souk and Emporium at Central Market, Mushrif Mall, Capital Plaza and Al Wahda City Extension.

The following graph provides a summary of the future retail supply in Abu Dhabi, with its geographical distribution indicated in the table below:

Retail Short Term Future Supply (GLA sqm) (2009-2013)



	2009	2010	2011	2012	2013
Total (yearly upcoming supply)	6,000	375,952	113,217	523,567	70,885
<b>Total Supply (units)</b>	<b>1,426,361</b>	<b>1,802,313</b>	<b>1,915,530</b>	<b>2,439,097</b>	<b>2,509,982</b>

Source: Real Estate Supply & Demand Model based on discussions with UPC and developers



### Distribution of Retail Supply (GLA/m<sup>2</sup>) - 2009-2013

	2008	2009	2010	2011	2012	2013
Mainland North		-	1,000	1,000	74,380	1,000
AD Island		-	187,233	21,372	64,484	17,806
North AD Island		-	55,471	4,500	61,714	4,500
Mainland South		-	90,600	81,114	20,665	8,905
Mainland Central		6,000	1,500	5,231	6,324	17,948
Islands		-	40,148	-	296,000	20,726
<i>Total (yearly upcoming supply)</i>		6,000	375,952	113,217	523,567	70,885
<b>Total Supply (GLA/m<sup>2</sup>)</b>	<b>1,420,361</b>	<b>1,426,361</b>	<b>1,802,313</b>	<b>1,915,530</b>	<b>2,439,097</b>	<b>2,509,982</b>

Source: Real Estate Supply & Demand Model based on discussions with UPC and developers

#### 5.4 Current Retail Demand

Based upon the level of spending available from the resident population and visitors to Abu Dhabi, it is estimated that the market could support a total of 2.1 million sqm (GLA), which suggests that Abu Dhabi is currently under supplied with retail space of approximately 700,000 sq.m.

The current retail demand is dominated by residents of the city, with tourists comprising just 9% of the total estimated retail spending in Abu Dhabi in 2009.

#### 5.5 Future Retail Demand

The demand for retail space in Abu Dhabi is expected to increase up to 2013, being driven by increased spending by residents and higher tourist levels with demand increasing from 2.1 million sq.m (GLA) in 2009 to 2.3 million sq.m (GLA) by 2013.

Opportunities are expected to arise for further retail space to support the new master planned residential communities outside of the main Abu Dhabi Island (where most of the current stock of retail floor space is located).

Abu Dhabi currently experiences a significant divergence of retail spending to Dubai, as residents are attracted to the wider range of retail centres available in the Emirates northern neighbour. As new centres offering new retail formats and experiences are completed in Abu Dhabi, much of this local demand will be retained within Abu Dhabi.

The emergence of Abu Dhabi as an international tourist destination will also support the future growth of the city's retail sector. It is projected that tourist spending will increase to more than 11% of the total retail spending in Abu Dhabi by 2013.

#### 5.6 Retail Market Outlook

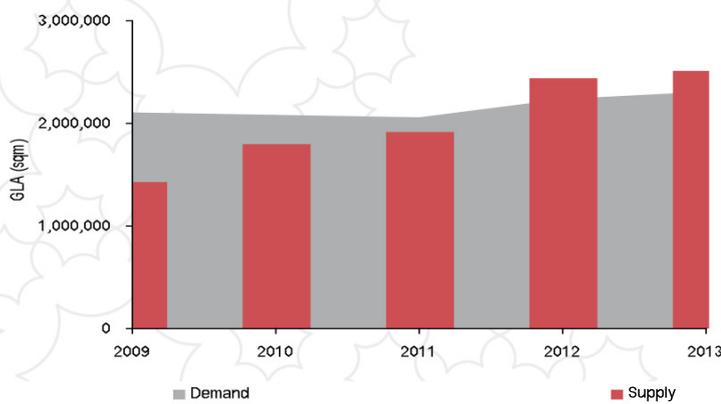
Given the growing resident population, the abundance of private wealth and the increasing level of tourists visiting Abu Dhabi, there is demand to support additional retail floor space in the city over the next few years.

The transformation of Abu Dhabi in to an international tourist destination, with the continuous support and promotion of the Government will act as a major driver of additional retail demand, with tourist spending expected to increase as a percentage of total retail spending over the next few years.

The demand for retail floor space is forecast to increase ahead of the level of spending from residents and tourists, as Abu Dhabi will retain a higher proportion of the total available spending as its retail offer improves and diversifies.

The completion of more than 1,000,000 sqm of additional retail space in Abu Dhabi over the next few years will address the current under supply the market is experiencing. Although the demand is also expected to register an increase, the market is perceived to move into a surplus position in 2012.

### Retail Supply & Demand Analysis (2009-2013)



Source: Real Estate Supply & Demand Model (based on inputs from UPC for supply and Macroeconomic & Demographic Model for demand)

### Retail Supply/Demand Analysis & Balance 2009-2013

	2009	2010	2011	2012	2013
Supply (GLA sqm)	1,426,361	1,802,313	1,915,530	2,439,097	2,509,982
Demand (GLA sqm)	2,106,256	2,088,102	2,058,136	2,237,440	2,315,368
Balance (GLA sqm)	-679,895	-285,789	-142,606	+201,657	+194,614

Source: Real Estate Supply & Demand Model (based on inputs from UPC for supply and Macroeconomic & Demographic Model for demand)

## 6 Hotel Market

### 6.1 Introduction

Abu Dhabi has embarked on an active campaign to improve its tourism and leisure offering. Abu Dhabi's various government entities have been investing in large scale masterplanned projects such as Saadiyat Island and Yas Island that include major visitor attractions and event venues along with luxurious hospitality developments introducing international hotel brands.

In addition to Saadiyat Island and Yas Island, large scale developments related to tourism include a plan to transform the entire coastline, including the Al Raha masterplanned area to create a new boardwalk, together with a wide range of new quality hotel offerings across the city.

Recent trends in the development of the Abu Dhabi hotel market can be summarised as follows:-

- Limited additions to supply from 2000 to 2008, although 2009 saw a significant level of new room inventory, particularly at Yas Island and the Grand Mosque District.
- High occupancy levels and room rates – with Abu Dhabi being the strongest performing hotel market in MENA region in 2008.
- While occupancies and room rates have both fallen in 2009, Abu Dhabi has continued to out perform other regional markets.
- Abu Dhabi's hotel sector has been less impacted by the global financial crises than other regional markets given its strong focus on the corporate and government sectors.
- Leisure travel is currently under represented although this situation is expected to change with increased leisure offerings over the next 2 – 3 years. The hosting of the first Abu Dhabi F1 Grand Prix at the newly constructed circuit on Yas Island represents the first of a number of major initiatives aimed at propelling the city as an increasingly viable leisure travel destination.
- The continued expansion of the national airline (Etihad) and the Abu Dhabi airport have increased demand and supported the growth of the hotel market in Abu Dhabi.
- The development and expansion of the Abu Dhabi National Exhibition Centre (ADNEC) has enabled the emirate to generate further hotel demand specifically within the MICE (Meetings, Incentives, Conferences and Exhibitions) segment of the market.

### 6.2 Current Hotel Supply

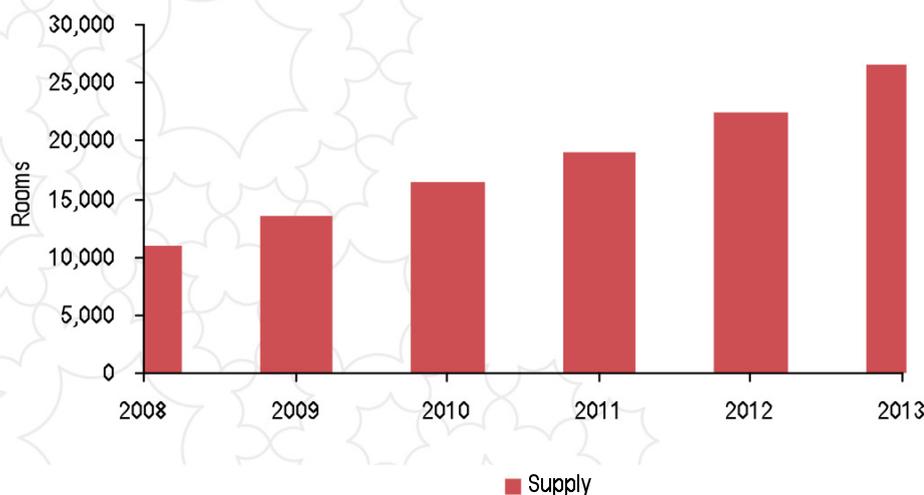
Based on data from the Abu Dhabi Tourism Authority (ADTA), the total stock of hotel rooms (including rest houses and serviced apartments) at the end of 2009 was approximately 13,500.

Approximately 60% of the total quality hotel supply is managed by international management companies (Accor, Hilton, InterContinental Hotel Group, Kempinski, Shangri-La, Millenium, Starwood and Wyndham). A further 18% of the quality supply is managed by regional management companies.

### 6.3 Future Hotel Supply

With the government's objective of developing the hospitality sector, strengthening the corporate market and developing the leisure segment, hotel supply is expected to continue to increase significantly over the next few years. Based on a 'project by project' assessment of known developments, it is estimated that the total supply of hotel rooms in Abu Dhabi will double, from its current level of 13,500 rooms to approximately 26,500 rooms by the end of 2013. Large scale tourism projects such as Saadiyat Island, Yas Island and Al Raha Beach will noticeably transform and rejuvenate the hotel market over time.

**Hotel Supply (rooms) (2009-2013)**



	2009	2010	2011	2012	2013
Total (yearly upcoming supply)	2,620	2,908	2,687	3,458	4,063
<b>Total Supply (units)</b>	<b>13,502</b>	<b>16,381</b>	<b>19,041</b>	<b>22,464</b>	<b>26,486</b>

Source: Real Estate Supply & Demand Model based on discussions with UPC and developers

This supply is broken down by area in the following table.

**Hotel Supply (rooms) by Area (2009-2013)**

	2008	2009	2010	2011	2012	2013
Mainland North	-	-	-	-	-	-
AD Island	-	281	1,630	1,448	1,904	840
North AD Island	-	-	421	1,091	584	378
Mainland South	-	-	-	-	90	450
Mainland Central	-	473	-	148	-	1,009
Islands	-	1,866	857	-	880	1,386
Total (yearly upcoming supply)	-	2,620	2,908	2,687	3,458	4,063
<b>Total Supply (rooms)</b>	<b>11,018</b>	<b>13,502</b>	<b>16,381</b>	<b>19,041</b>	<b>22,464</b>	<b>26,486</b>

Source: Real Estate Supply & Demand Model based on discussions with UPC and developers

## 6.4 Current Hotel Demand

Abu Dhabi has been one of the strongest performing hotel markets in the world over the past few years as the number of hotel visitors to the city has doubled from around 800,000 in 2002 to more than 1.5 million in 2009. The corporate sector is the strongest component of the Abu Dhabi market, with the business and MICE sectors accounting for over 60% of all visitors to the city in 2009.

This demand has been translated into very strong growth in average daily room rates (ADRs). Abu Dhabi had one of the lowest ADRs in the region in 2004 (AED 286/USD 78). Since then, the market has experienced a remarkable average growth rate of 40%, with ADRs reaching AED 1,076 (USD 293) in 2009.

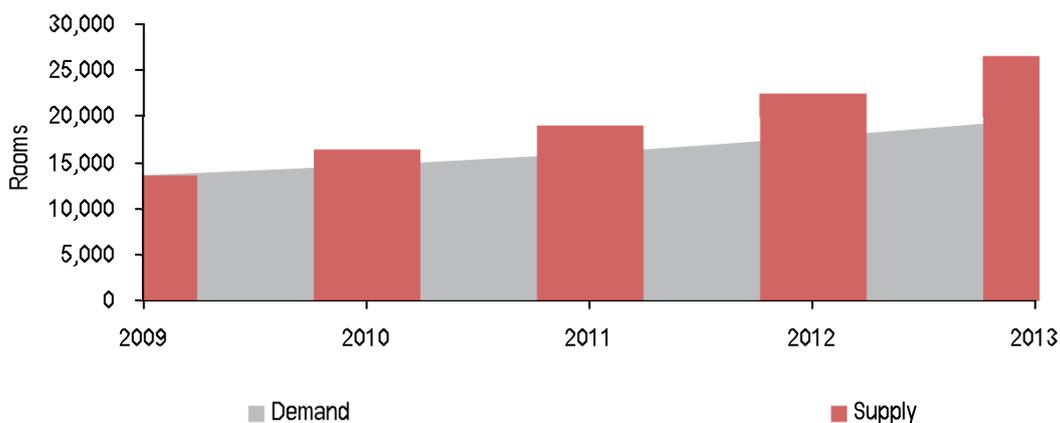
## 6.5 Future Hotel Demand

Based on the Real Estate Supply & Demand model prepared for this assignment, there is a current demand for some 13,500 hotel rooms in Abu Dhabi. By 2013 the demand for hotel rooms is expected to reach close to 20,000 rooms (an increase of approximately 45%) riding on the back of strong economic growth and the continued expansion of the tourist industry.

## 6.6 Hotel Market Outlook

Despite mismatches in certain locations and types of property, the overall demand and supply conditions are currently relatively balanced in the Abu Dhabi hotel market. Despite the continued growth in demand the significant level of planned supply of new hotel rooms is expected to shift the market into a situation of oversupply from 2010 onwards. By the end of 2013, there is forecast to be 26,500 hotel rooms in the Metropolitan, as opposed to a demand for around 19,700 rooms.

Hotel Supply & Demand (2009 – 2013)



Source: Real Estate Supply & Demand Model (based on inputs from UPC for supply and Macroeconomic & Demographic Model for demand)



### Hotel Supply & Demand (2009-2013)

	2009	2010	2011	2012	2013
Supply (rooms)	13,502	16,381	19,041	22,464	26,486
Demand (rooms)	13,525	14,702	16,079	17,770	19,677
Balance (rooms)	-23	+1,679	+2,962	+4,694	+6,809

Source: Real Estate Supply & Demand Model (based on inputs from UPC for supply and Macroeconomic & Demographic Model for demand)

## 7 Inferences and Critical Catalysts for Future Growth

### 7.1 Inferences

The real estate market in Abu Dhabi is currently under supplied in relation to the demand for residential, office and retail premises, with the hotel market experiencing a rough balance between current demand and supply levels.

These shortages have resulted in very low vacancy rates and rental / sale prices that are higher than for competing space in other regional markets. This situation is negatively impacting the Abu Dhabi economy, resulting in a significant loss of potential employment, spending and investment.

The real estate industry has responded to the ongoing shortages of quality product, with a large number of new projects being announced in recent years, since the relaxation of land ownership laws, the publication of the Abu Dhabi Plan 2030 and the release of major new development areas.

The market peaked in 2008 and entered into downturn in 2009 in line with the wider global economic slowdown. As a result of the slowdown, many projects in the UAE have been delayed or cancelled due to a fall in price and investor demand and lack of project funding due to an over reliance on pre-sales and the reduction in debt financing. In spite of these delays and cancellations, significant levels of new supply are expected to enter all sectors of the market between 2010 and 2013.

The retail and hotel markets would move into a potential surplus situation over the next three years. The office market is expected to achieve a balance between supply and demand while the residential sector is expected to remain undersupplied especially in the lower and mid market segments, with a shortfall of around 26,300 units remaining, by 2013.

### 7.2 Understanding Critical Catalysts beyond the Projections

The expected increase in employment, population and economic activity on which the demand projections outlined in this study are based, are dependent on the successful implementation of a number of the initiatives outlined in the Abu Dhabi Economic Vision 2030. These include the following:

#### Growing Abu Dhabi's Employment & Population Base

It should be recognised that currently Abu Dhabi's clear strength is derived from its oil and gas based economy and its abundant private wealth. Abu Dhabi currently has a relatively small pool of labour and a developing skills base. The success of initiatives to up-skill the Emirati population and attract expatriates that can contribute to the development of the economy will be an essential pre-requisite for the continued growth of real estate demand.

The economy will continue to rely on the continual influx of expatriates. Current restrictions on residency permits and visas, and restrictions on homeownership are prohibitive and not conducive to the long term retention of a skilled expatriate workforce. A relaxation of these current restrictions would provide a major boost to real estate demand.

## Promoting Company Start-up and Growth

Achieving the rapid economic development of high-growth sectors of the economy also requires substantial developments to the regulatory framework. Abu Dhabi currently has limited free zones (where companies are able to have full corporate ownership and control) and the process for starting up new businesses is complicated and often bureaucratic. For companies engaged in the knowledge-based industries that the Government is targeting there also needs to be developments to ensure the protection of intellectual property rights.

The Government is taking active steps to develop new industries through university science parks and through the activities of Government entities such as Mubadala and Zones Corp. In spite of these initiatives, the process of setting up a new business in Abu Dhabi remains challenging and this needs to be addressed to stimulate inward investment.

## Regulatory Reform

Related to the point above, Abu Dhabi needs to establish a business and legal environment comparable to other developed economies. Central themes of the Government's policy agenda include establishing a dynamic open economy, a large empowered private sector, a sustainable knowledge-based economy and a transparent regulatory environment.

Progress is being made to establish a legal regime that will sustain high levels of foreign investment and improving market transparency.

For the real estate sector specifically, proposals are in place for new legislation relating to strata law, trust account / escrow law, the creation of a real estate regulator, obligation to obtain permits and title prior to pre-sale and mortgage law. These reforms are required urgently in order to ensure greater regulation and control over the real estate sector.

## Transparency

As real estate markets become more global, the relative openness or transparency of different markets has emerged as an increasingly important consideration for investors, occupiers and other real estate stakeholders. Markets benefiting from improved transparency and greater openness tend to be those in which it is easier to conduct business.

While the government of Abu Dhabi is making great efforts to substantially improve the transparency of the real estate sector and other sectors of the economy, it is clear that more needs to be done to bring Abu Dhabi in line with other leading markets internationally.

## Land Registry

One of the main elements that define transparent real estate markets is the operation of an accurate and publically accessibility land and property registry system. The Abu Dhabi government is considering options for improving the operation of the current land and property registry system. Improvements in this area are another essential component in stimulating the additional demand for real estate assumed in this study.



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# Appendix A - Technical Report of Macroeconomic & Demographic Model

## I. Introduction

This document describes the Macroeconomic & Demographic model developed for the current study. This model has been used to generate the baseline forecasts of demand for each sector of the real estate market (employment, population, tourist numbers, retail spending) in a theoretically consistent fashion. These forecasts have then been used as an input into the real estate supply and demand model.

In most cases the historical data is taken from Abu Dhabi sources with little estimation based on other countries. The coefficients used in forecasting are also based on Abu Dhabi data wherever possible but data shortages and the need for theoretical robustness has required data from other markets to be used in calibrating the model in a number of areas.

The main characteristics of the model are:

- A sector breakdown of GDP and employment.
- GDP growth has been based on increases in world demand, capacity and domestic population and demand.
- Nominal investment demand depends on nominal GDP and hence, is sensitive to the oil price.
- Employment growth is driven by real GDP growth.
- Given the low dependency ratio of the non-citizen (expat) population, there is a strong relationship between employment growth and population growth.
- Tourism is forecast to grow in line with world demand and increases in capacity in Abu Dhabi.
- Retail spending is the sum of spending by residents and tourists. Residents' spending increases in line with residents' incomes and tourist spending in line with tourist nights.

The latest official data on Abu Dhabi is for 2008, which has been used as the base year for this model. While the model has been developed for the period 2008-2030, this report is confined to the findings over the shorter timeframe (2008 – 2013).

## II. GDP

The Macroeconomic & Demographic model captures the key features of growth in the Abu Dhabi economy and the linkages between Abu Dhabi's GDP and world demand. The model reflects the extent to which each sector is dependent on the world economy and capacity augmentation within Abu Dhabi.

For some sectors (e.g.: manufacturing and financial services), GDP in Abu Dhabi is sensitive to world demand but will increase as the local capacity (defined as the capital stock by sector) builds up. Other sectors (e.g.: transport, storage and communications; real estate and business services) are more dependent on cross sectoral demand within Abu Dhabi. The construction sector is largely driven by investment levels.

Given the lack of available time series data for Abu Dhabi GDP, time series estimation techniques can not be utilised to calibrate the model. As an alternative, coefficients have been derived to reflect each sectors dependency upon world demand, capital stock formation, and Gross Value Added (GVA) in other sectors.

The Model also identifies nominal GDP with a broad two-sector breakdown – oil and non-oil. Prices in the oil sector are linked to world oil prices and the non-oil prices are driven by the world price of manufactured goods.

The real GDP estimates used in this study were obtained by taking the current price estimates by broad sector from the Ministry of the Economy and deflating them by sector level implicit price deflators for the UAE as a whole (also taken from the Ministry of the Economy). Estimated real GDP for Abu Dhabi as a whole is the sum of the sector estimates. This estimate is not consistent with the aggregate estimate of real GDP in Abu Dhabi produced by the Ministry of the Economy (between 2001 and 2008 the GDP estimate used here increases at an average annual rate of 11.6% per annum compared to 10% per annum in the Ministry of the Economy estimate). The study uses the alternative estimate because disaggregated sector level estimates were needed to inform the projections of employment and economic activity that underpin the projections of space requirements. The inconsistency implies that the assumption of constant sector level price deflators across Abu Dhabi as a whole is not valid. The simple alternative of constraining the initial set of sector level real GDP estimates to sum to the Ministry of the Economy's estimates was not used as this implies that the discrepancy was shared equally across sectors and this is not necessarily true. Investigation of the discrepancy, in fact, implies that most of the difference between the two GDP estimates lies in the oil sector and that the two estimates of non-oil GDP are likely to be much closer.

The historical discrepancy in aggregate GDP estimates has little impact on the projections of employment and space needs. GDP in the oil sector is assumed to increase in line with oil production in the future and this assumption would not change with a revision to the historical estimates and employment in the oil sector assumes a relationship with production that would still hold with the new data. More importantly, GDP (and employment) in the non-oil sectors is not likely to be significantly different to the levels and growth rates implicit in the Ministry of the Economy's aggregate GDP figures.

### III. Investment

Nominal (or current price) investment is determined by an equation which links it to lagged nominal GDP which is taken as a measure of affordability and demand.

Aggregate fixed investment is another important factor in the model as it determines the total amount of investment available for sector level capacity building. It also provides a link between oil prices, affordability and investment, as higher oil prices increase nominal GDP which, in turn, will increase nominal investment.

### IV. Employment

The model provides forecasts of both employment and labour productivity in Abu Dhabi Emirate; this provides the basis for estimates of office-based employment in Abu Dhabi Metropolitan.

#### Employment in Abu Dhabi Emirate

Employment growth in the Emirate is linked to GDP by sector and to exogenous, labour augmenting, productivity trends. All sectors (except agriculture and domestic services), are assumed to show positive labour productivity growth (with productivity in agriculture and domestic services assumed to be flat).

Labour productivity growth is modest in most sectors, averaging 1.6 per cent per annum for non-oil GDP growth for the 2008-2013 period. The exception is manufacturing where the estimates are an average of 3.9 per cent per annum. While this is much more rapid than experienced in Abu Dhabi in the past it is not particularly rapid in comparison with the experience of many other countries with developing manufacturing sectors.

### Office-Based Employment

Figure 1 provides an analysis of the proportion of total employment undertaken in offices. This is derived from an analysis of the occupational mix of employment in the household survey and an assessment of the proportion of office-based occupations actually working in office premises undertaken by the Project Team. Office-based workers are defined as workers in the following occupations:

- Legislators, senior officials & managers
- Professionals
- Technicians and associate professionals
- Clerks

**Figure 1: Derivation of Office-Based Employment Coefficients**

	Percentage of Employment in Mainly Office-based occupations	Office-adjustment	Final Coefficient
Agriculture, Live stock and Fishing	4.9	0.90	4.4
Mining and Quarrying :			
- Crude oil and Natural Gas	71.2	0.90	64.1
- Quarrying	71.2	0.90	64.1
Manufacturing Industries	47.6	0.90	42.9
Electricity, Gas and water	58.4	0.90	52.5
Construction	43.3	0.50	21.7
Wholesale Retail Trade and Repairing Services	35.7	0.60	21.4
Restaurants and Hotels	20.1	0.60	12.0
Transports, Storage and Communication	51.3	0.90	46.1
Real Estate and business Services	63.9	1.00	63.9
Social and Personal Services	55.3	0.95	52.6
The Financial Corporations Sector	97.3	1.00	97.3
Government Services Sector	37.9	1.00	37.9

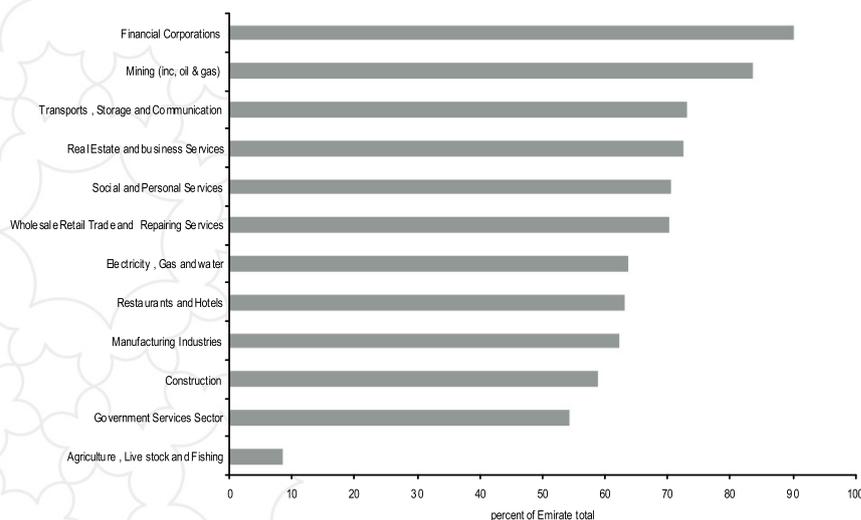
Explanation: The final coefficient is equal to the percentage of Employment in Mainly Office-based occupations multiplied by the office adjustment (which is the proportion of those occupation groups who actually work in offices). For example, 20.1% of people working in Restaurants and Hotels are estimated to work in one of the mainly office based occupations (Legislators, senior officials & managers, Professionals, Technicians and associate professionals and Clerks) but only 60 per cent of these are estimated to actually work in offices (as opposed to working on site) giving a final coefficient of 12%.

Source: Employment in office-based occupations from Abu Dhabi Household Survey (2007/08); Project Team Analysis

## Employment in Abu Dhabi Metropolitan

Figure 2 shows recent estimates of employment in Abu Dhabi Metropolitan as a percentage of that in the Emirate as a whole.

**Figure 2: Employment in Abu Dhabi Metropolitan**



Source: 2007/8 Household Survey

Employment in Financial services has the biggest concentration in the city followed by mining (including oil and gas). These ratios are assumed to remain constant from 2008 to 2013.

## V. Incomes and Spending

Given the lack of time series data on incomes and spending in Abu Dhabi, forecasts have been created using simple economic relationships such as spending increases in line with incomes rather than attempts to do more sophisticated analysis (e.g.: examining the impact of changes in personal wealth on spending patterns).

The key inputs of income are taken from the 2007/08 Household Survey, which provides data on the make up of household income (split by citizens' and non-citizens' households). These estimates have been adjusted to reflect the estimated population and households in the population and census data and the total value of income from employment from the National Accounts.

Total income from employment is equal to average earnings multiplied by total employment. The other components of income are:

- Income from self-employment – assumed to grow in line with income from employment
- Property and rental Income – assumed to grow in line with real non-oil GDP.
- Transfers – assumed to grow in line with population.

It is to be noted that the make up of income is very different for citizens and non-citizens households.

The proportion of total income spent on retail goods split by citizens and non-citizens households is taken from the Household Survey. Estimates of tourist spending are added to spending by residents to give total retail spending and total spending on hotels and restaurants.

## VI. Tourism

The model forecasts total hotel nights based on an equation relating hotel night demand to world GDP as well as capacity growth in the Abu Dhabi hotels and restaurants sector.

Estimates of total spend on accommodation (including food and other facilities) are taken from Abu Dhabi Tourist Authority data, while spending per night has been based on estimates from Jones Lang LaSalle Hotels for Dubai, as no comparable information is available in respect of Abu Dhabi.

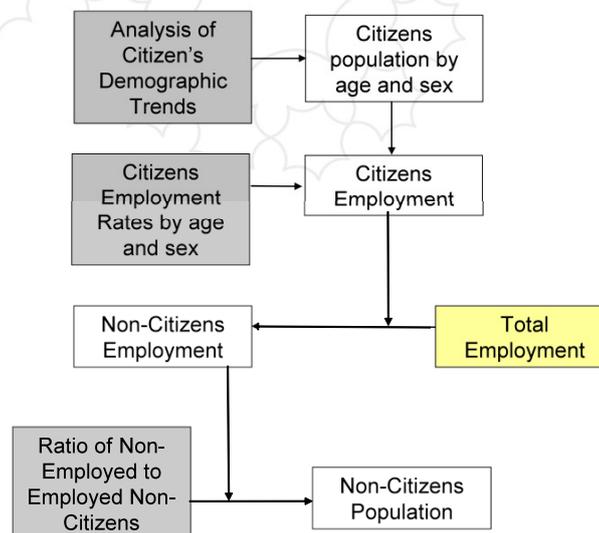
Hotel night demand is divided into Meetings, Incentives, Conventions and Exhibitions (MICE), other Business, Domestic and International Leisure.

## VII. Demographics

The main linkages at the Emirate level are illustrated in the following flowchart:

- **The Citizens (Emirati) population** is driven by an analysis of birth and death rates.
- **Citizens** employment is determined by population and employment rates.
- **Non-citizens (or expat) Employment** is equal to total employment less citizens' employment.
- **Non-employed non-citizens** are determined by an exogenous ratio of non-citizen non-employment to non-citizen employment (the non-citizen's dependency ratio).
- **Total population** equals the citizens' population plus the non-citizens population.

Figure 3: Main Linkages in the Demographic Model



Source: The Project Team

## Population in Abu Dhabi Metropolitan

The most recent estimate of the Abu Dhabi District population is 969,000 as at 2009 (as per Statistics Centre Abu Dhabi). This figure has been considered as the Abu Dhabi Metropolitan baseline for the Macroeconomic and Demographic Model and the Real Estate Forecast Model.

## Appendix B - Technical Report of Real Estate Demand Model

### VIII. Approach

The demand assumptions undertaken are based on the Project Team's in-depth knowledge of the Abu Dhabi real estate market obtained through day to day interaction with major developers, occupiers and investors, as well as macroeconomic and demographic forecasts from the Macroeconomic & Demographic Model (as discussed in Appendix A above).

### IX. Residential Sector

#### Assumptions

The Macroeconomic & Demographic model provides a forecast for the growth of the total population of residents within the Abu Dhabi metropolitan area (broken down from the emirate level) as well as the split between citizens (nationals) and non-nationals (expatriates).

Using this data as an input, forecasts of the demand for residential units in Abu Dhabi have been prepared, based on the following key assumptions:

- Household Size (nationals/non-nationals)

#### Household Size Breakdown by Nationals/Non-Nationals

	2009	2010	2011	2012	2013
Avg. household size - Nationals	6.4	6.4	6.3	6.2	6.2
Avg. household size - Expatriates	3.5	3.4	3.4	3.4	3.3

Source: Abu Dhabi Household Income & Expenditure Survey (2008), Project Team Analysis

It must be stressed that the estimates of current and future residential demand contained within this report are extremely sensitive to assumptions in respect of the average household size. The project team has estimated current and projected future household size from a review of the current published data and its experience of the Abu Dhabi real estate market, with no detailed surveys of average household size being undertaken for this project. There is a need for more detailed empirical research on this subject and the proposed population census to be undertaken in 2010 may provide valuable additional data which can be used to refine and adjust the average household size and consequently the future demand for residential units in Abu Dhabi.

- Income Breakdown by population



### Income Breakdown by population

Income Groups	Monthly Income USD	Yearly Income USD
A	-	-
B	8,992<	107,902<
C	8,991-6,540	107,901-78,474
D	6,538-4087	78,473-49,046
E	4,086-1,635	49,045-19,619
F	1,634>	19,618>

Source: Abu Dhabi Household Income & Expenditure Survey (2008), Project Team Analysis

- Propensity to Share

### Nationals / Expatriates, Propensity to Share

Dwelling type	Households per dwelling
Studio apartments	1.0
1 bedroom apartments	1.0
2 bedroom apartments	1.3
3 bedroom apartments	2.0
Single Villas	1.0

Source: Project Team Assumptions

The other major factor influencing future residential demand is the extent to which the current latent demand (from those families that now share villas and units) will be converted to actual demand. The expected fall in residential rentals in the Abu Dhabi market will lead to many of those families currently sharing units being able to afford their own accommodation, thereby unlocking latent demand

## X. Office Sector

### Assumptions

The *Statistics Centre – Abu Dhabi* provides a breakdown of workers by economic sector. This has further been broken down at the level of the Abu Dhabi metropolitan area by the Project Team and the forecast number of workers from present to 2013 has been ascertained by economic sector.

### Office Workers by Sector (% share)

Business Sectors	
Agriculture , Live stock and Fishing	4%
Mining and Quarrying	64%
Manufacturing Industries	43%
Electricity , Gas and water	53%
Construction	22%
Wholesale Retail Trade and Repairing Services	21%
Restaurants and Hotels	12%
Transports , Storage and Communication	46%
Real Estate and Business Services	64%
Social and Personal Services	53%
The Financial Corporations Sector	97%
Government Services Sector	38%

Source: Macroeconomic & Demographic Model, Project Team Assumptions

### Floor Space Ratio (m<sup>2</sup> per employee)

Based upon physical surveys of office space on Abu Dhabi Island, international benchmarks and local knowledge of the space standards of major corporate occupiers, the average office space per employee has been calculated to be approximately 15 sqm.

This office space per employee has been kept constant going forward with the assumption that these ratios will remain the same even with the addition of newer quality office supply.

## XI. Retail Sector

### Assumptions

The most important assumptions in respect of the retail sector relate to the allocation of retail spending to different retail formats and the level of turnover (retail spending per sq.m) that can be achieved in respect of each retail format.

These assumptions have been derived from the following sources:-

- Retail spending has been allocated to different retail formats in line with the breakdown of existing and future supply in each of these formats.
- Estimates of retail turnover (sales per sq.m of retail space) are not generally available within Abu Dhabi. Estimates have therefore been made, based upon the Project Team's knowledge of turnover levels in Dubai.



### Spending Behaviour by Mall Type, Residents

	2009	2010	2011	2012	2013
Super Regional Mall	10%	10%	15%	15%	20%
Regional Mall	25%	25%	30%	30%	30%
Neighbourhood Mall	10%	15%	15%	15%	15%
Convenience Mall	5%	10%	10%	10%	10%
Non Malls	50%	40%	30%	30%	25%

Source: Project Team Assumptions

### Spending Behaviour by Mall Type, Tourists

	2009	2010	2011	2012	2013
Super Regional Mall	10%	15%	20%	20%	25%
Regional Mall	25%	25%	30%	30%	30%
Neighbourhood Mall	10%	10%	10%	10%	10%
Convenience Mall	5%	5%	5%	5%	5%
Non Malls	50%	45%	35%	35%	30%

Source: Project Team Assumptions

### Retail Turnover (AED/p.a.)

	2009	2010	2011	2012	2013
Super Regional Mall	11,550	12,128	12,734	13,371	14,039
Regional Mall	11,025	11,576	12,155	12,763	13,401
Neighbourhood Mall	9,975	10,474	10,997	11,547	12,125
Convenience Store	8,925	9,371	9,840	10,332	10,848
Non Malls	7,875	8,269	8,682	9,116	9,572

Source: Project Team Assumptions

There is very little available data on retail turnover (sales per sq.m) levels in Abu Dhabi. The project team has therefore derived the above estimates based on its knowledge of centres in Dubai and elsewhere. The forecasts of future retail demand are very sensitive to the assumed level of retail turnover in different retail formats and changes in these assumptions could therefore have a significant impact on the actual demand for additional retail floor space from 2010 to 2013.

## XII. Hotel Sector

### Assumptions

Forecasts of total visitor arrivals, average length of stay and total room night demand have been taken from the economic and population model.

This total demand has been allocated across different types of hotel product based on research on the Abu Dhabi market undertaken by in-house hotel specialists. The assumptions by hotel star have been undertaken based on future additional upcoming supply year-on-year by grade as well the occupancy rate split up to 2013.

The breakup of demand by hotel type is shown in the following table.

#### Share of Hotel Nights by Hotel Type

	2009	2013
1* - Economy	1%	0%
2* - Budget	3%	5%
3* - Midscale	27%	19%
4* - Upscale	30%	27%
5* - Upper Upscale	36%	43%
5* - Super Luxury	4%	5%

Source: Project Team Assumptions

## Appendix C - Technical Report of Real Estate Supply Model

### XIII. Current Supply

The current supply represents the total existing supply in 2008 plus the upcoming supply till end of 2009 and is reflected as follows:

- **Residential Sector:** This current residential stock at the end of 2009 is estimated to be 177,400 units. This figure has been derived from data from the Abu Dhabi Distribution Company (ADDC) which shows a total of 155,854 residential electricity connections across the Abu Dhabi metropolitan area as at November 2008. This figure has been inflated to allow for new completions during 2009 and an allowance for shared villas (a proportion of which operate from a single meter).
- **Office Sector:** the current office supply has been provided according to an in-house survey conducted in the Abu Dhabi metropolitan area.
- **Retail Sector:** The current retail supply has been provided according to an in-house survey conducted in September 2009 covering the retail market (malls and disorganised retail outlets) in the Abu Dhabi metropolitan area.
- **Hotel Sector:** The total number of hotel rooms (including serviced apartments) in the Abu Dhabi metropolitan area is currently approximately 13,500 rooms based on data from Abu Dhabi Tourism Authority (ADTA) and primary surveys conducted by Project Team.

### XIV. Future Supply

#### Supply Forecasts

Estimates of short term future supply have been prepared on a project by project basis from 2008 to 2013. This process has involved the following:

Data on individual projects has been compiled from various sources including the UPC's own database on both master developments and other potential projects. The Project Team has supplemented the list with data from other market sources and its own future supply pipeline. An additional allowance has also been made for extra floor space supply (2010 – 2013) from permits from the ADM. Any data obtained from developers has been verified by the Project Team with site surveys / physical inspection of projects currently "under construction" being undertaken where appropriate.

The Project Team has worked closely with the UPC and developers during this process. The objective has been to reconcile differing data and agree a common set of assumptions and the resulting phasing and materialisation from each individual project from 2010 to 2013.

As a result of the above process, an agreed future supply pipeline has been developed for the period 2010 to 2013. This comprises the basis of the short term supply forecasts presented in this report.

- The residential supply is presented by number of units,
- The office and retail supply by GLA (sqm) and
- The hotel supply by number of rooms.

In cases where only GFA is provided, specific calculations were used to obtain the requested unit depending on the sector and are defined as follows:

- Office GLA (sqm) = Office GFA (sqm)\*80%
- Residential Number of units = Residential GFA\*80% /125 sqm for apartments
- Retail GLA (sqm) = Retail GFA (sqm)\*60%
- Hotel number of rooms = Hotel GFA (sqm)/100

The future supply has been phased on case by case development bases, which reflects the current situation of each project. The phasing of each project was obtained through 3 stages:

- 1<sup>st</sup> Stage: UPC phasing sentiment - defined through meetings with UPC projects leaders
- 2<sup>nd</sup> Stage: Developers phasing sentiment – defined through meetings and discussions with the main developers
- 3<sup>rd</sup> Stage: In-house phasing sentiment and market analysis

## XV. Stock Withdrawals

Given the current under-supplied nature of the real estate market in Abu Dhabi, there is little incentive for owners to withdraw older buildings for refurbishment or to clear the site for alternative uses. As the market matures and becomes increasingly competitive in the future, it is assumed that some space will be withdrawn (demolished) as it completes its lifecycle.

A withdrawal rate of 1% of the existing stock is therefore applied in each of our future supply forecasts. This withdrawal is only applies in those years where supply exceeds demand as it is assumed that there will be no incentive to withdraw or upgrade premises in those years where demand exceeds supply in that sector of the market.

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