The Outlook for Net Overseas Migration

May 2011

people our business

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Contents

Abstract

The Department of Immigration and Citizenship (the department) is working to implement a Long-Term Migration Planning Framework which looks at both temporary and permanent migration flows over a multi-year period. As part of this, the department is forecasting net overseas migration (NOM) by flows and visa components and updating these forecasts on a quarterly basis. The NOM forecasting framework combines the latest data on visa grants with past behaviour of migrants across different visa groups to enter the population. It takes into account the impact of existing policy decisions as well as the official economic outlook, including changes announced in the 2011-12 Budget.

There is a good reason for doing NOM forecasts based on the detailed and current department's internal data. Official NOM figures are released by the Australian Bureau of Statistics (ABS) with a lag of more than six months. The most recent (preliminary) figures released by the ABS are for the year-ending September 2010. On the other hand, the department's quarterly report provides estimates for the most recent quarter and the outlook over five years. In future, the department will look to expand its forecasting capacity to analyse NOM flows at the state, territory and regional levels.

Introduction

The report introduces the work done to date by the Department of Immigration and Citizenship (the department) on analysing and forecasting net overseas migration. It also outlines the proposed approach to further develop and extend this capability.

Defining Net Overseas Migration (NOM)

Before examining NOM it is worthwhile putting into context. There are two components of change in Australia's population:

- natural increase – made up of births less deaths; and

- net overseas migration – made up of overseas arrivals less overseas departures.

NOM is therefore the net gain or loss of population through immigration to Australia and emigration from Australia.

Overseas travellers are only included in the population as NOM arrivals if they are in Australia for 12 months or more over a 16 month period. Conversely, overseas travellers are subtracted from the population as NOM departures if they are away for 12 months or more over a 16 month period. The level of NOM is the balance of NOM arrivals minus NOM departures.

This '12/16 month rule' means almost all short term movements such as visitors do not count as either overseas arrivals or overseas departures. It also means that people who are not permanent residents of Australia can be counted as overseas arrivals, even if they leave Australia briefly (regardless of the number of times) so long as their residency stints add up to at least 12 months within a 16 month period.

Data for NOM calculations are obtained from passenger travel cards which travellers fill out before they exit or enter Australia, combined with data from the department's administrative systems. The Australian Bureau of Statistics (ABS) publishes official NOM data.

Preliminary and final estimates of NOM

Because of the '12/16 month rule', it takes a long time to finalise NOM and the ABS only released final NOM data for June 2009 at the end of March 2011.

In the meantime and because of the interest in population figures, the ABS releases preliminary NOM estimates every quarter which are modelled on patterns of traveller behaviour observed in final NOM data for the corresponding quarter one year earlier.

The relationship between the publication cycle and the preliminary and final estimates of NOM is shown below.

Now	**Preliminary NOM**	**Final NOM**
	Now + 6 months	**Now + 21 months**
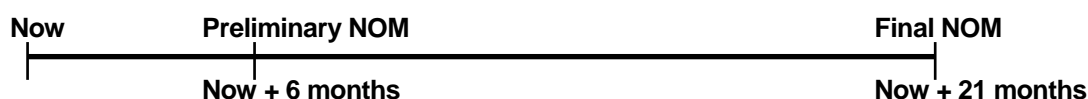
For example, the latest preliminary NOM estimates for the September 2010 quarter were released in March 2011 and the next December 2010 quarter preliminary NOM estimates are expected to be released at the end of June 2011.

These are still somewhat dated and as such it can be useful for the department to further forecast and project NOM using the methodology outlined in this paper. The department also updates these forecasts on a quarterly basis.

The forecasts can then be used for purposes such as providing more accurate benchmarking for Australia's labour force, and to assist government agencies with planning for population change. They can also be used to estimate the impact on Australia's population of changes to Australia's Permanent Migration and Humanitarian Programs. The forecasts incorporate changes announced in the 2011-12 Budget.

NOM and the impact on Australia's population

Currently, NOM accounts for around 54 per cent of Australia's population growth. While NOM had accounted for almost 70 per cent of population growth in the recent past it is now down and more consistent with historical contributions to population growth averaging between 45 and 50 per cent.

Net overseas migration has outstripped the natural increase (the excess of births over deaths) in the population since 2005 (Chart 1). Even though the total fertility rate has shown some growth in recent years and is around 1.9 births per woman (recovered from a low of 1.7 in 2001), it remains below replacement levels of 2.1 births per woman.

Chart 1: Components of Population growth
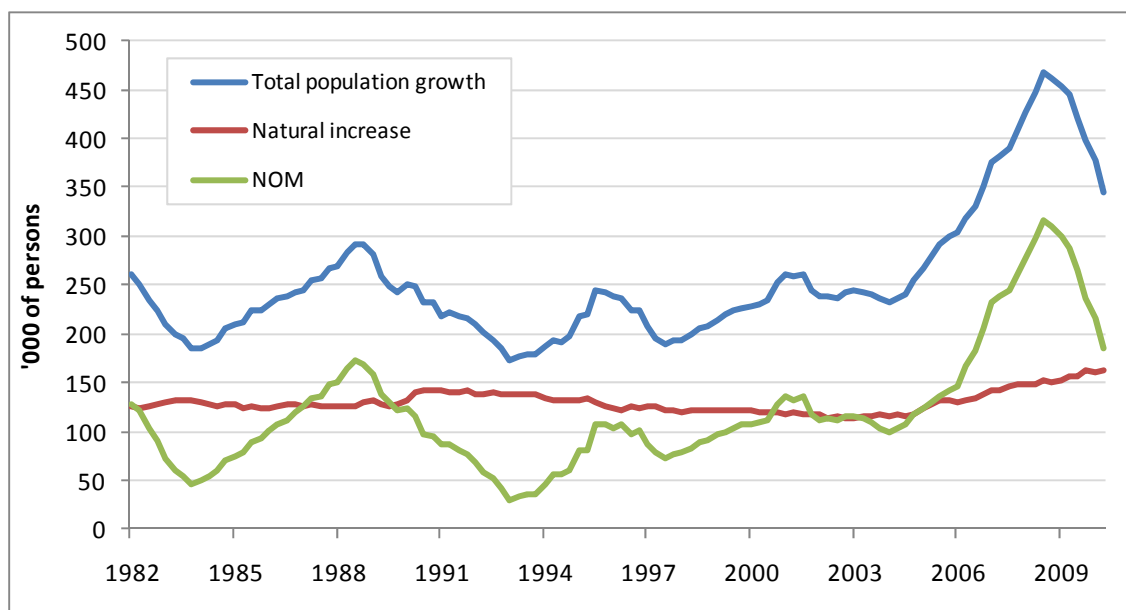
Source: Australian Bureau of Statistics.

Chart 1 also indicates that a turning point has been crossed and NOM is on its way down. This is leading to lower population growth. Australia's annual population growth rate slowed to 1.57 per cent in the year ending September 2010. This is down from its peak growth rate of 2.2 per cent for the year ending December 2008.

Although falling, population growth remains above the long term average since 1982 of around 1.4 per cent.

Recent NOM trends and projections

Historical NOM trends

Population data from the ABS show NOM peaked at 315 700 a year, a record high (year ending December 2008). Since this peak, NOM has fallen and the latest ABS estimates indicate that it was 185 800 for the year ending in September 2010. This is a 41 per cent fall from its peak.

The recent decline is largely due to fewer arrivals. For the year ending September 2010, arrivals were down 70 900 compared to September 2009. Over the same period there were also somewhat greater departures, up 31 400, further reducing NOM. Although falling, NOM is still at relatively high levels.

Components and drivers of NOM

To understand the reasons behind this recent decline, the composition of NOM needs to be examined. As Table 1 shows, the components making up NOM include arrivals under the permanent Migration and Humanitarian programs, temporary long-stay migrants such as students and subclass 457 skilled workers, and the free movement of Australian residents and New Zealand citizens.

Importantly, there may not be a one-for-one relationship in any one year between the size of the Permanent Migration and Humanitarian Programs and the level of NOM, due to large fluctuations in the arrival and departure of temporary residents.

Table 1: Composition of final NOM in 2008-09

NOM component	Description	Drivers	Share of NOM
	Permanent		
Net Permanent arrivals	Arrivals under the Permanent Migration Program Arrivals under the Humanitarian Programs	The total size of the Permanent Migration and Humanitarian Programs is set by Government	29.0%
	Temporary		
Net Temporary residents	International students Temporary skilled (457) workers Working holiday makers Tourists and visitors	Largely uncapped but can be influenced by Government policy settings	64.8%
	Others		
Net Other arrivals	Returning Australian citizens and permanent residents Australian citizens and permanent residents emigrating New Zealand citizens settling and emigrating	Australian citizens and permanent residents can have free movement Movement of New Zealand citizens uncapped / free movement under the Trans-Tasman Travel Arrangement	6.2%

Source: Department of Immigration and Citizenship and Australian Bureau of Statistics.

As indicated in the table above, the key driver of NOM is temporary residents, some of whom are seeking to remain in Australia permanently by eventually taking a place in the Permanent Migration and Humanitarian Programs.

A reliable disaggregation of final NOM by its components is available from 2004-05 to 2008-09 (Chart 2). It shows the steady increase in NOM by temporary residents at the expense of permanent migrants.

Chart 2: Shares of final NOM 2004-05 to 2008-09
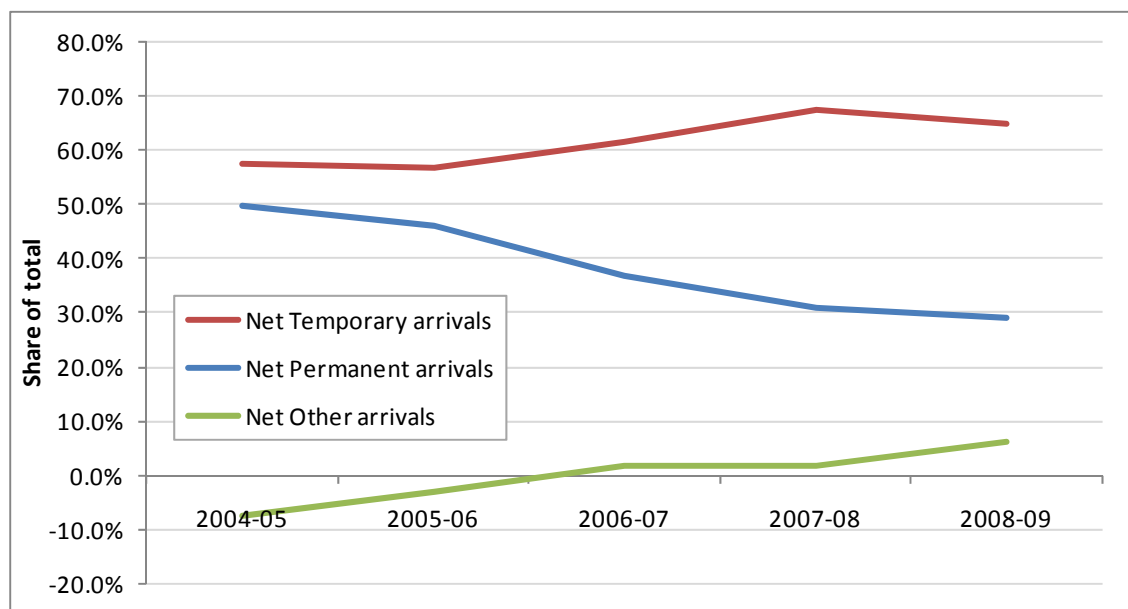
Source: Department of Immigration and Citizenship and Australian Bureau of Statistics.

Examining NOM in greater detail, it is clear that by far the greatest contribution to growth in recent years has come from international students (Chart 3). At the peak level of NOM in 2008-09, students accounted for some 41 per cent of the total, while skilled temporary subclass 457 visa holders contributed only around 10 per cent. It is also clear that the majority of international students opted to stay in Australia, with their NOM arrivals significantly outweighing NOM departures.
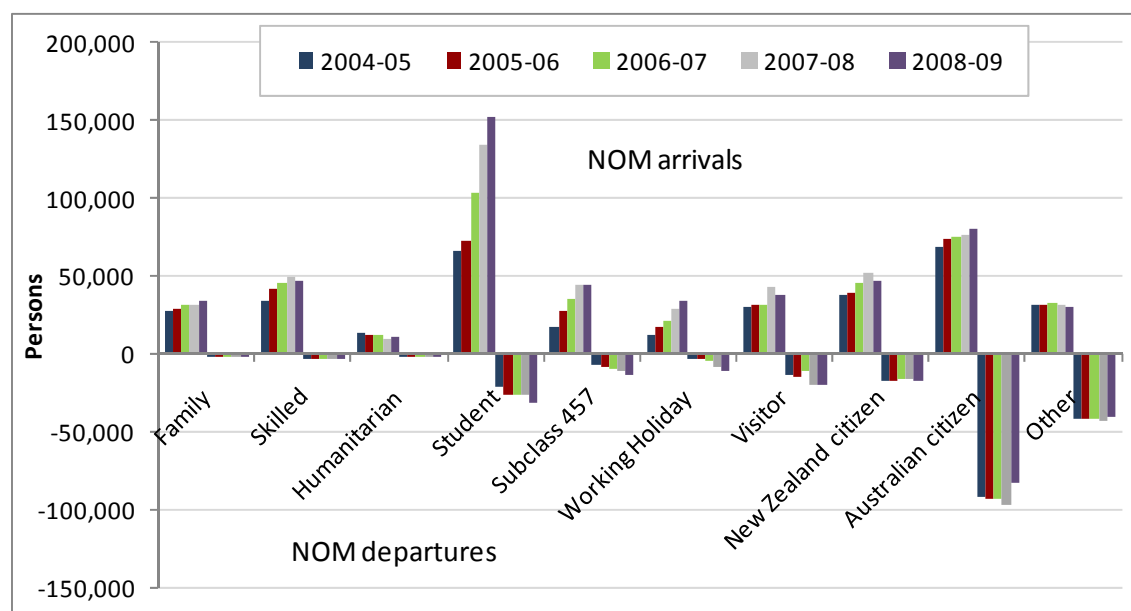
Chart 3: Migration components of final NOM, 2004-05 to 2008-09

Source: Department of Immigration and Citizenship and Australian Bureau of Statistics.

It should, however, be noted that while temporary migrants will be counted in NOM if they stay long enough in Australia, it is also true that most temporary migrants leave Australia and get counted out of NOM (unless they obtain a permanent visa and provided the visa pathways for applications lodged in Australia are operating as intended). Therefore, the impact of temporary migrants on NOM would be broadly neutral over the medium term to long term.

In addition, the Australian Bureau of Statistics disaggregates NOM data by visa component according to a person's 'initial category of travel' where an individual must be assigned to one and only one movement. For example, if an international student entered Australia on a temporary student visa and then transitioned to a permanent skilled stream visa, they would still be counted as a temporary international student for the purposes of NOM.[1]

The comparative trends between the Permanent Migration Program and NOM are illustrated below at Chart 4. It shows the two broadly tracked together for much of the last 50 years. The exception has been the recent period since 2006 where the inflow of temporary migrants, particularly international students led to a significant increase in NOM.

Since this time, recent reforms to temporary and permanent skilled migration as well as changes to student visa settings have had an impact in reducing NOM by restoring the balance between inflows and outflows of temporary migrants including international students. The more recent decline in NOM is due in part to the lower numbers of international students arriving. It is also driven by increased numbers of students departing Australia. Although this is not yet apparent in the final NOM data due to the time lags discussed above, it is evident in the latest departmental visa grants data as outlined in Chart 10 below.

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[1] More information can be found on the ABS website at: http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3412.02008-09?OpenDocument. Further work may be required to examine the current status of previously temporary migrants and to develop a potentially more realistic NOM visa reporting methodology.

Chart 4: Permanent Migration Program and NOM
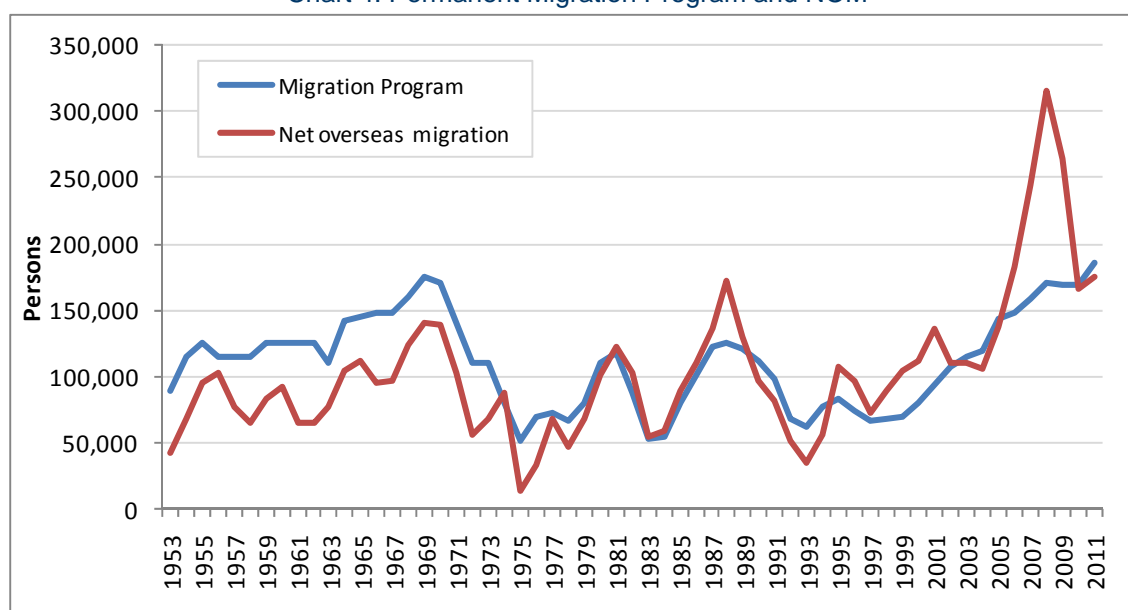
Source: Department of Immigration and Citizenship and Australian Bureau of Statistics. The data for 2011 are DIAC estimates.

Over the medium to long term, and providing the visa settings for temporary entrants are operating as intended, the economy is the key driver of NOM, whether explicitly through employer sponsored workers such as those on subclass 457 visas or more implicitly through the Permanent Skilled Migration Programs. The relationship between NOM and Gross Domestic Product (GDP) has been highlighted previously in the department's publication *Population Flows: Immigration Aspects 2008-09.*[2] An update and adaptation of this relationship is presented below in Chart 5 which shows NOM responding to GDP growth within a 12 to 18 month lag on average. It is not a one for one relationship as there are some non-economic motivations for NOM (such as humanitarian and family visa entrants) but nevertheless there is a link.

Interestingly, in more recent times the onset of the Global Financial Crisis in 2008 saw GDP growth fall but at the same time NOM was rising rapidly. Again, this is likely to point to the increase in temporary migration (such as international students) which may not have immediately been linked to changes in the economy but rather the migrants' desire to arrive and stay permanently in Australia. This 'disconnect' is now being corrected with NOM and GDP growth coming closer together.

Chart 5: NOM and GDP growth (year ending)
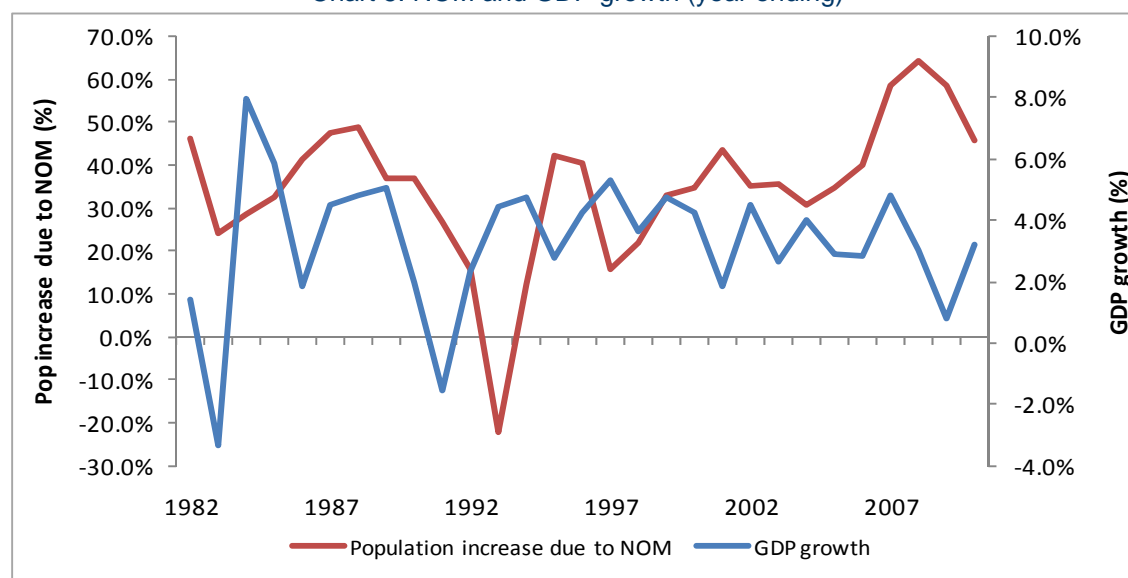
Source: Department of Immigration and Citizenship and Australian Bureau of Statistics.

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[2] See for example Chapter 6 on The Economics of migration at: http://www.immi.gov.au/media/publications/statistics/popflows2008-09/

The link between NOM and the economy is most evident in employer sponsored visas, particularly the subclass 457 which is having a growing impact on NOM. This was observed during the recent economic downturn, when demand for 457 visas declined significantly. With labour market conditions improving, visa applications for temporary skilled workers are on the rise, up 70 per cent by the end of February 2011 compared to the low in October 2009 (Chart 6). Reforms to the subclass 457 visa program which have sought to ensure that temporary overseas workers are paid at market rates and do not take Australian jobs, combined with fast visa processing times by the department, may have contributed to making this program more responsive to labour needs.

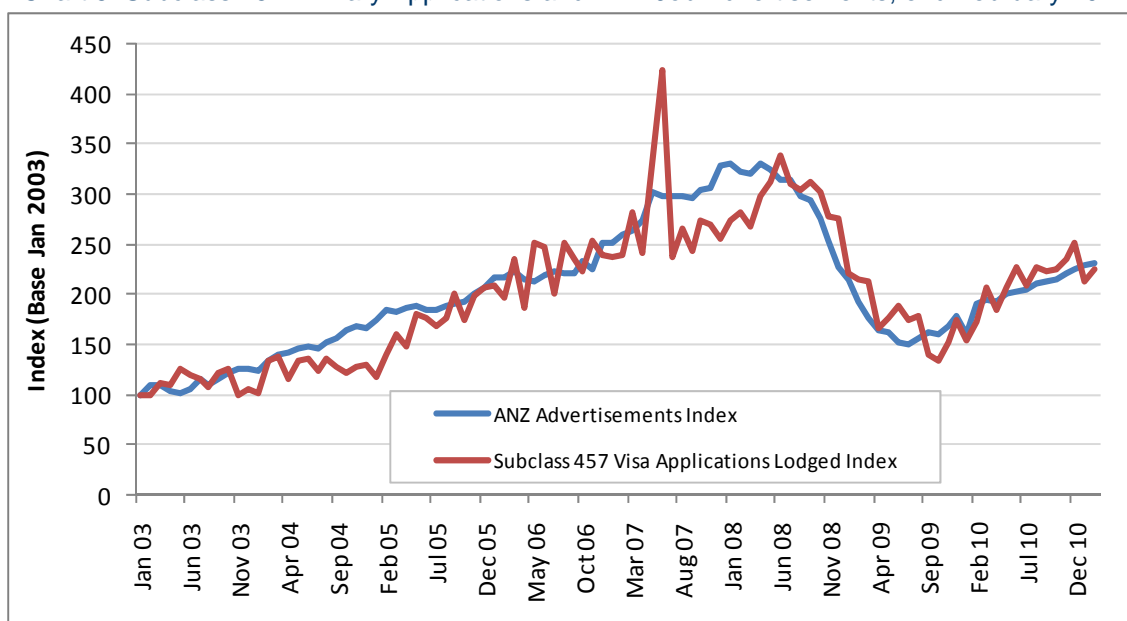Chart 6: Subclass 457 Primary Applications and ANZ Job Advertisements, end February 2011

Source: Department of Immigration and Citizenship and Australian Bureau of Statistics.

It will be important to maintain the link between economic needs and skilled migration in future, particularly as the economy recovers and we continue to see strong terms of trade driven by economic growth in emerging economies such as China and India. This is likely to result in skilled labour needs amongst growing parts of the economy, for example resource rich West Australia.

Overall NOM forecasts and projections

The Department of Immigration and Citizenship has drawn on its extensive data on migrant visa flows and past behaviour of migrants to develop forecasts of NOM over the forward estimates period (currently to 2013-14). The department's forecasting framework is broadly outlined at **Appendix C**.

The department estimates that the level of NOM for the quarter just completed (year ending March 2011) is 160 800. It is forecast to fall to between 150 000 and 160 000 by June 2011 (Chart 7). This would represent a fall of around 50 per cent from the December 2008 peak of 315 800. The key driver behind the expected fall in NOM is a much lower inflow of international students as well as higher student departures.

Beyond 2011 the projections are that NOM will recover and stabilise at between 170 000 and 180 000 on average for the period through to 2013-14. These projections take into account the expected effect of the policy decisions to date, after which they are based on an assumption of no policy change (for example, no changes in the size and composition of the permanent migration program) and also take into account official economic forecasts.

The forecasts and projections are based on trends in visa grants, past behaviour of migrants across different visa groups, the impact of existing policy reforms, and also incorporate official forecasts of future economic conditions. The forecasts are revised and produced on a quarterly basis after the release of the ABS 3101.0 - Australian Demographic Statistics data. To date, they have proven accurate at forecasting NOM ahead of the ABS data – usually to around 95 per cent accuracy. For example, the department's

forecast for the year ending in the September 2010 quarter was 195 200 persons whereas the ABS preliminary NOM data for the same period was 185 800 persons. Some of the difference could be attributed to differences between preliminary and final NOM data.

Chart 7: Components of NOM
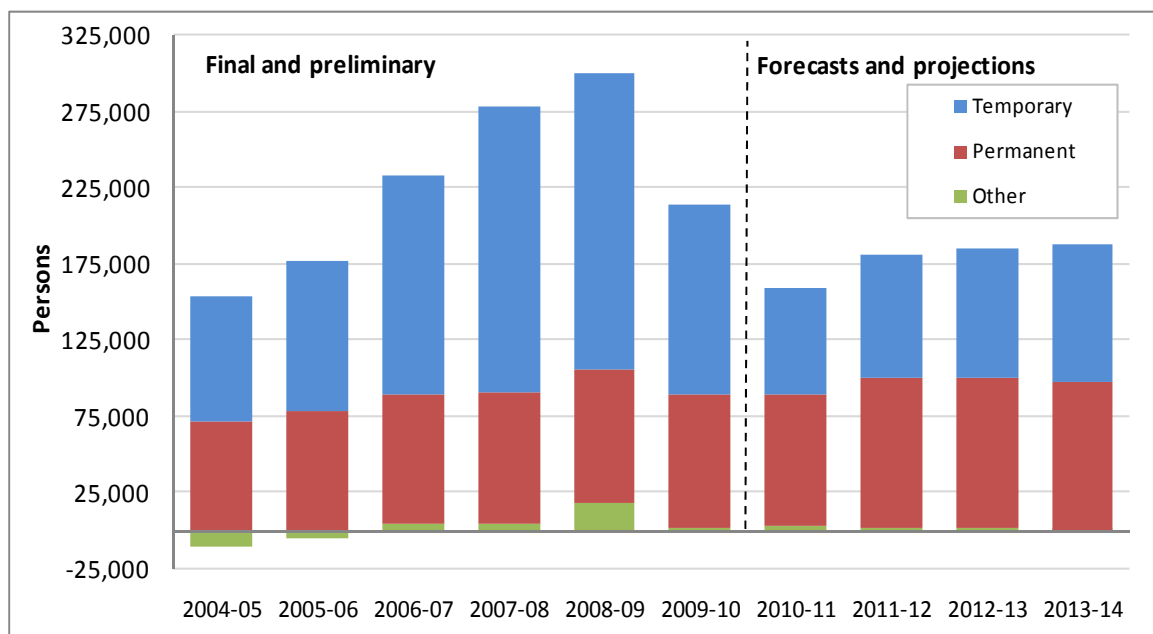
Source: Department of Immigration and Citizenship.

Outlook for the temporary component of NOM

It is anticipated that as the economy gathers strength, employers will look to immigration to address skills shortages, pushing up the demand for subclass 457 visa holders. Similarly, there are indications that there will be increased number of Working Holiday Makers.

However, it is also expected that the contribution to NOM of international students will continue to ease over the projected period before stabilising, due to re-establishing the balance between their inflows and outflows. This downside impact partially offsets the projected increase in NOM from a continued economic recovery.

As shown in Chart 8, the temporary migration component of NOM has grown strongly in the past few years, largely due to the contribution of international students and temporary skilled migration (subclass 457). The recent fall in the students' contribution to NOM may be attributed to the strengthening of the Australian dollar, the US initiative to recover its share of the international education market, the introduction of robust integrity measures by the department, and changes to the General Skilled Migration Program.

The contribution of the subclass 457 (Long Stay Business) visa and that of Working Holiday Makers to NOM decreased recently due to the economic slowdown, but it will start to grow as the economic recovery continues supported by high terms of trade, and the unemployment rate approaching 'full employment'.

Chart 8: Contribution of temporary immigrants to NOM
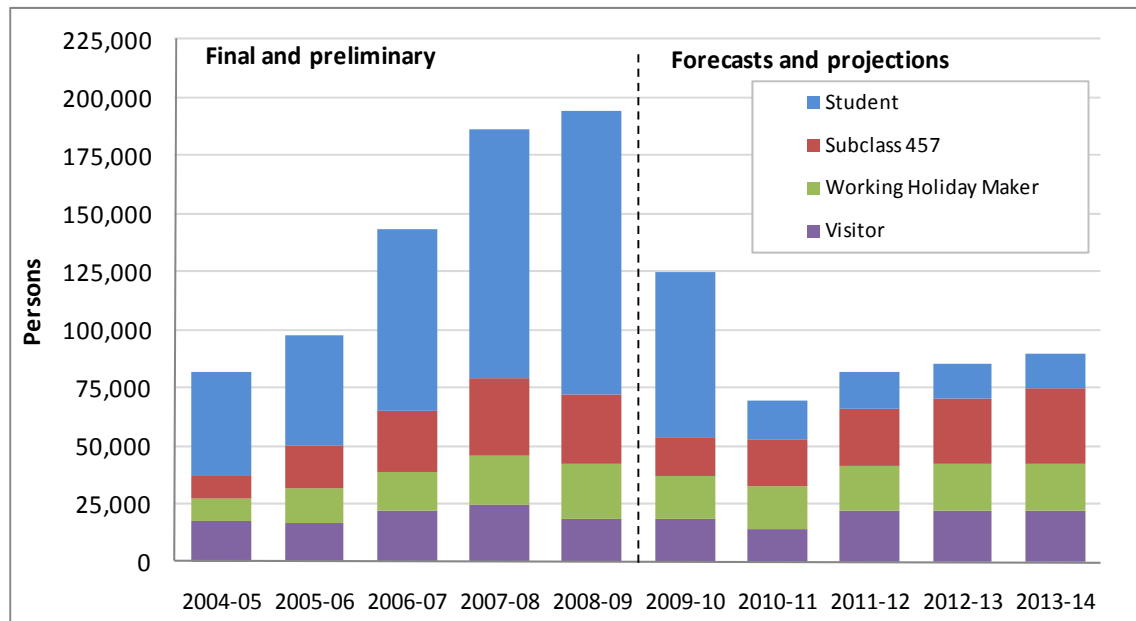
Source: Department of Immigration and Citizenship.

Most of the decline in NOM is due to a lower inflow and larger outflow of international students, not skilled migrants. As a result, the share of NOM has shifted towards both permanent and temporary skilled workers (Chart 9).

The skilled component of NOM – permanent Skill stream visas and Temporary Business subclass 457 visas – is projected to increase its share of NOM from around 25 per cent in 2008-09 to 43 per cent by 2013-14.

On the other hand, the impact on NOM of temporary migrants with limited work rights – consisting of international students and working holiday makers – are expected to fall from their peak of 49 per cent in 2008-09 to around 20 per cent by 2013-14.

Chart 9: Changing composition of NOM
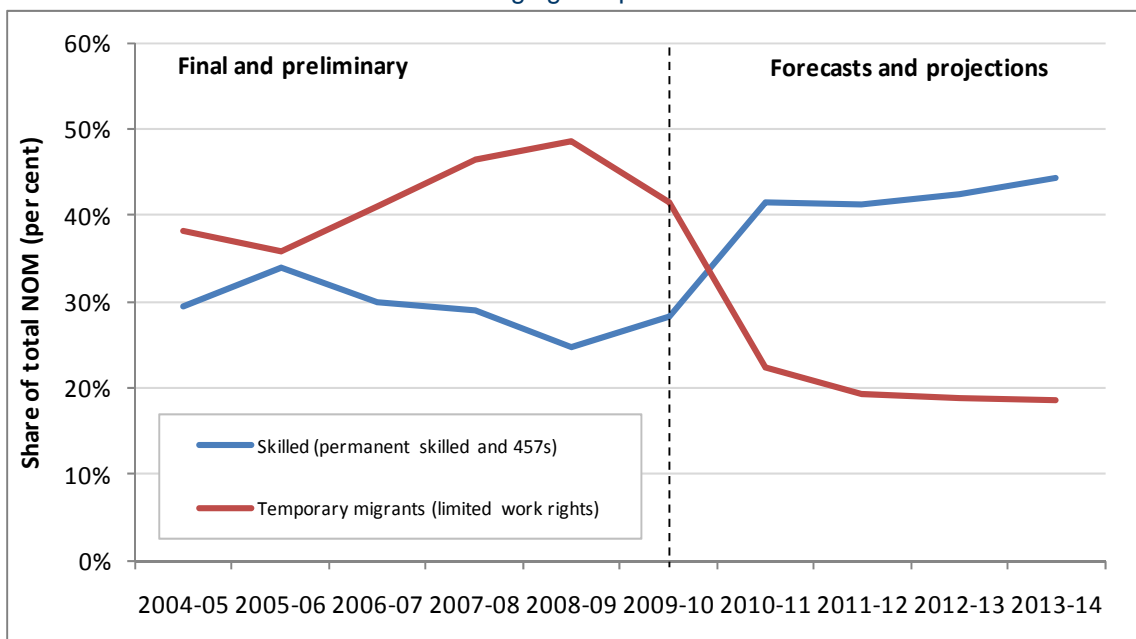
Source: Department of Immigration and Citizenship.

Trends in visa grants

The outlook for NOM and its changing composition is supported by the latest visa grant data from outside Australia for temporary migrants (Chart 10). Visa grants from outside Australia are the key leading indicator and input into the department's net overseas migration forecasts. They subsequently translate into overseas arrivals and additions to NOM (as outlined in **Appendix C**).

Although year ending[3] visa grants from outside Australia for students are down by 48 per cent compared to their peak in August 2009, this is in part offset by other visa categories that contribute to NOM. For example, subclass 457 visas are 43 per cent higher in year ending terms compared to their recent low for the year ending March 2010. Similarly, Working Holiday Makers (WHMs) have also recovered.

Visa grants for international tourists have also recovered strongly in recent times after falling to a low in August 2009. However, they could become a downside risk to NOM in future given the continuing strength of the Australian dollar.

Chart 10: Year ending visa grants for temporary migrants from outside Australia
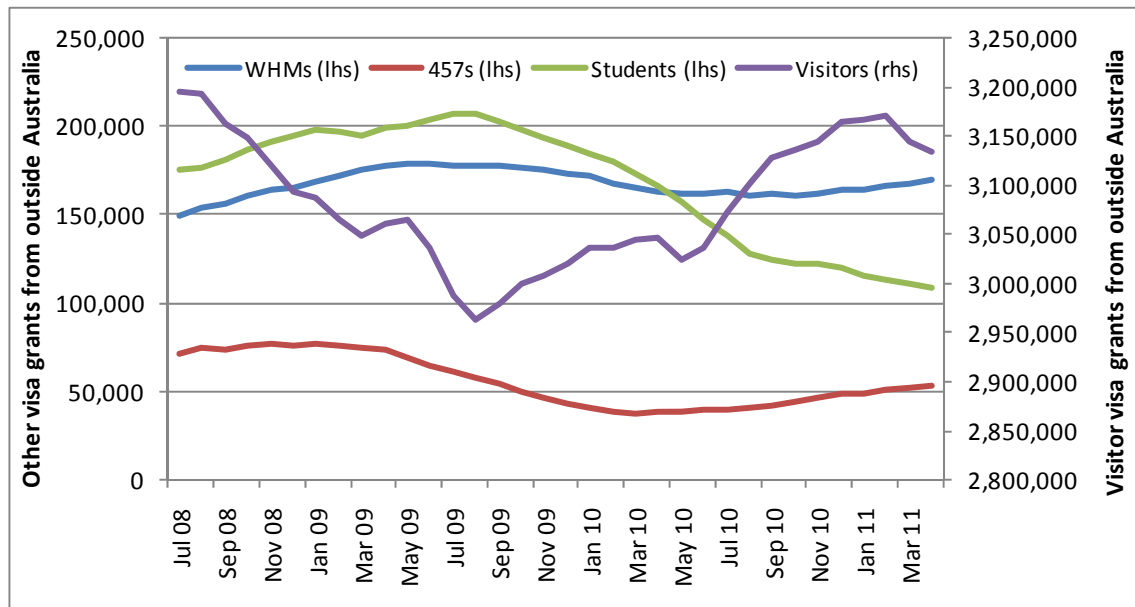
Source: Department of Immigration and Citizenship.

Trends in visa stocks

Another reason that NOM is expected to stabilise and recover to be between 170 000 and 180 000 on average is due to the relatively stable overall stock of temporary residents in Australia.

The stock of temporary entrants and New Zealand citizens physically present in Australia is reported every three months by identifying people who have entered Australia on temporary visas and have not left or been granted permanent residence. The stock data is unique to the department and gives a more complete picture of the population impact of Australia's temporary entry programs.

The stock of temporary entrants excluding New Zealanders, as at 31 December 2010, was 1 039 700 persons, relatively unchanged from December 2009. Contributions to this stock in recent years had been due to rapidly rising migrant arrivals, but most recently is due to visa renewals and change of status from one temporary visa sub-class to another. While the number of students has fallen compared to the same period last year, the stock of bridging visas grew by around 37 per cent since December 2009 (Table 2).

In addition, the stock of temporary skilled graduate visas (subclass 485) increased from 2 760 in

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[3] Year ending means a rolling 12 month total updated each month. This approach smooths out seasonal variations and enables analysis of the underlying direction as well as magnitude of the data.

December 2008 to 22 460 by December 2010. This visa allows overseas students who do not meet the criteria for a permanent General Skilled Migration visa to remain in Australia for 18 months to gain skilled work experience or improve their English language skills. The subclass 485 visa was introduced in September 2007. Prior to that date skilled graduates would have moved straight into the permanent visa pipeline. This recent growth in bridging and temporary skilled graduate visas reflects the growing pipeline of applicants lodged in Australia for permanent residency.

Table 2: Stock of temporary entrants

Visa Major Group	2008 31 Dec	2009 31 Dec	2010 31 Dec	2009 to 2010 % change
Temporary Resident	160 260	153 430	157 240	2.5%
Temporary Skilled Graduate - subclass 485	2 760	14 830	22 460	51.4%
Student	291 460	324 560	291 200	-10.3%
Student Guardian	2 270	1 870	1 530	-18.2%
Work/Holiday	112 590	120 680	118 220	-2.0%
Visitor	349 200	365 530	372 150	1.8%
Bridging visa	50 650	67 260	92 200	37.1%
Transit visa	100	100	130	30.0%
Other Temporary Entrant	5 230	5 290	7 030	32.9%
Total	**971 760**	**1 038 720**	**1 039 700**	**0.1%**

Source: Department of Immigration and Citizenship, data rounded to nearest 10.

Appendix A and **Appendix B** present detailed forecasts of NOM by major visa category and flow on a year ending and quarterly basis until 2013-14.

Appendix C outlines in greater detail the main concepts and methodology behind the NOM forecasting and projection framework.

Future directions

As noted above, the level of immigration tends to move with the level of economic activity.

Migration can often be thought of as a two-stage selection process. In the first stage, the would-be migrant seeks to migrate based on self selection – both positive and negative. The positively selected are those who consider that the payoff for their skills and experience would be greater in the destination country.

In the second stage, a national government imposes its own selection policies often aiming to ensure the destination country extracts the maximum benefits from the potential migrant intake (for example by focusing on skilled migrants).

The implication of this, and supported by empirical studies, is that migration flows are driven by factors which are independent of national government selection policies or indeed economic needs of the destination country (see for example Borjas 1987)[4].

In the Australian context, the majority of our major NOM and Migration Program source countries have a GDP per person that is well below that of Australia (Table 3). Similarly these counties (for example China, India, Sri Lanka, Vietnam) have local wages that are far lower than those in Australia. This disparity is likely to persist for a considerable time to come. One of the challenges facing the department is likely to involve ensuring the integrity of the migration intake such that Australia receives only enough migrants that are consistent with economic or labour market needs.

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[4] Borjas (1987) Self-Selection and the Earnings of Immigrants, NBER Working Paper No. 2248, http://www.nber.org/papers/w2248.

Table 3: Top contributors to NOM by citizenship, 2008-09

Country	Persons	Share of total
India	59 987	20.0%
China	33 355	11.1%
New Zealand	30 224	10.1%
England	23 309	7.8%
Philippines	11 758	3.9%
South Africa	11 639	3.9%
Nepal	11 079	3.7%
Vietnam	9 045	3.0%
South Korea	8 089	2.7%
Ireland	7 200	2.4%
Other	94 178	31.4%
Total	**299 863**	**100.0%**

Source: Department of Immigration and Citizenship.

Australia's immigration program has traditionally been planned and managed on an annual basis through the setting of permanent Skill, Family and Humanitarian intake levels. As discussed above, however, there has been an increase in temporary migrants some of whom have sought to then stay in Australia permanently. A key driver of this desire to settle in Australia is income disparities between Australians and many of our major migration source countries.

As a result, the department is implementing a Long Term Migration Planning Framework to ensure that Australia's future immigration levels are guided by the genuine economic needs of the country, rather than by the desire of prospective migrants to live in Australia. The framework will look beyond the annual permanent migration program and examine both temporary and permanent migrants over a multi-year period. This report is a step towards this goal and takes into account the official economic outlook in forecasting the level and composition of NOM.

This NOM forecasting framework and report will help inform the level and composition of the annual Migration Program. The modelling can also be extended in future to include more detailed economic analysis and to better understand the regional impacts of NOM, including by utilising detailed administrative data on location of various temporary migrants (for example students and subclass 457 visa holders). The NOM forecasting framework and NOM report will be refined over time to reflect these developments.

The Long Term Migration Planning Framework will be an input to the *Sustainable Population Strategy* and will involve greater dissemination of information to assist whole of government and community planning.

Appendix A: Year ending forecasts and projections of NOM

| Year ending NOM arrivals | 2010 | 2010 | 2011 | 2011 | 2011 | 2011 | 2012 | 2012 | 2013 | 2014 |
'000 of persons	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Jun	Jun
Student	112.6	97.8	85.2	79.1	76.0	74.2	73.8	73.4	72.1	71.1
Subclass 457	27.1	28.5	30.8	33.1	35.1	36.7	38.1	39.5	45.8	53.0
Working Holiday Maker	28.2	28.3	28.7	29.2	29.7	30.0	30.2	30.3	30.6	30.9
Visitor	54.4	57.1	59.4	61.4	62.9	63.9	64.5	64.8	65.2	64.9
Total Temporary	**222.3**	**211.7**	**204.1**	**202.7**	**203.7**	**204.9**	**206.6**	**208.0**	**213.7**	**219.8**
Skilled	46.7	47.3	48.0	48.6	49.9	51.1	52.4	53.7	53.7	53.7
Family	33.6	32.8	32.0	31.1	32.7	34.3	35.9	37.5	37.5	37.5
Humanitarian	11.7	11.7	11.7	11.7	11.9	12.1	12.4	12.6	12.6	12.6
Total Permanent	**92.1**	**91.9**	**91.6**	**91.4**	**94.5**	**97.6**	**100.7**	**103.7**	**103.7**	**103.7**
Australian citizen	57.6	57.3	56.9	56.8	56.5	56.2	55.8	55.7	54.7	53.6
New Zealand citizen	40.7	40.8	41.1	41.1	41.3	41.4	41.7	41.8	42.5	43.1
Other	29.6	29.4	29.1	28.7	28.7	28.5	28.2	27.9	27.1	26.3
Total Other	**127.8**	**127.5**	**127.1**	**126.7**	**126.5**	**126.2**	**125.8**	**125.4**	**124.2**	**123.0**
Grand Total	**442.2**	**431.0**	**422.9**	**420.8**	**424.7**	**428.6**	**433.0**	**437.1**	**441.6**	**446.6**
Year ending NOM departures	2010	2010	2011	2011	2011	2011	2012	2012	2013	2014
'000 of persons	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Jun	Jun
Student	-63.2	-65.9	-64.8	-62.4	-59.0	-56.8	-55.8	-57.8	-56.9	-56.1
Subclass 457	-10.4	-10.9	-11.7	-12.6	-13.4	-14.0	-14.5	-15.1	-17.5	-20.2
Working Holiday Maker	-10.1	-10.2	-10.3	-10.5	-10.7	-10.8	-10.8	-10.9	-11.0	-11.1
Visitor	-42.1	-46.7	-44.8	-47.5	-42.9	-42.0	-42.4	-42.6	-42.9	-42.7
Total Temporary	**-125.8**	**-133.7**	**-131.7**	**-133.0**	**-126.0**	**-123.7**	**-123.6**	**-126.4**	**-128.2**	**-130.1**
Skilled	-3.0	-3.1	-3.1	-3.1	-3.2	-3.3	-3.4	-3.5	-3.5	-3.5
Family	-2.1	-2.0	-2.0	-1.9	-2.0	-2.1	-2.2	-2.3	-2.3	-2.3
Humanitarian	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Permanent	**-5.1**	**-5.1**	**-5.1**	**-5.1**	**-5.3**	**-5.4**	**-5.6**	**-5.8**	**-5.8**	**-5.8**
Australian citizen	-79.7	-79.3	-78.9	-78.5	-78.2	-77.7	-77.4	-77.0	-75.5	-74.1
New Zealand citizen	-9.1	-10.0	-10.1	-10.1	-10.6	-11.1	-11.8	-12.4	-14.0	-17.5
Other	-36.7	-36.3	-35.9	-35.6	-35.1	-34.8	-34.5	-34.1	-32.8	-31.5
Total Other	**-125.5**	**-125.6**	**-124.9**	**-124.2**	**-123.9**	**-123.7**	**-123.7**	**-123.6**	**-122.3**	**-123.0**
Grand Total	**-256.4**	**-264.4**	**-261.7**	**-262.3**	**-255.2**	**-252.8**	**-252.9**	**-255.8**	**-256.4**	**-258.9**
Year ending net NOM	2010	2010	2011	2011	2011	2011	2012	2012	2013	2014
'000 of persons	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Jun	Jun
Student	49.4	31.9	20.4	16.7	17.0	17.4	18.0	15.6	15.2	14.9
Subclass 457	16.8	17.6	19.1	20.5	21.7	22.7	23.6	24.4	28.3	32.8
Working Holiday Maker	18.0	18.1	18.4	18.7	19.0	19.2	19.3	19.4	19.6	19.8
Visitor	12.3	10.4	14.6	13.9	20.0	21.8	22.1	22.2	22.3	22.2
Total Temporary	**96.5**	**78.0**	**72.5**	**69.7**	**77.7**	**81.2**	**83.0**	**81.6**	**85.5**	**89.7**
Skilled	43.7	44.3	44.9	45.4	46.6	47.8	49.0	50.2	50.2	50.2
Family	31.6	30.8	30.0	29.2	30.7	32.2	33.7	35.2	35.2	35.2
Humanitarian	11.7	11.7	11.7	11.7	11.9	12.1	12.3	12.5	12.5	12.5
Total Permanent	**86.9**	**86.7**	**86.5**	**86.4**	**89.2**	**92.1**	**95.0**	**97.9**	**97.9**	**97.9**
Australian citizen	-22.1	-21.9	-22.0	-21.7	-21.7	-21.5	-21.6	-21.3	-20.9	-20.5
New Zealand citizen	31.5	30.8	31.0	31.1	30.7	30.4	29.9	29.3	28.4	25.7
Other	-7.1	-7.0	-6.8	-6.8	-6.5	-6.3	-6.2	-6.2	-5.7	-5.2
Total Other	**2.3**	**1.9**	**2.2**	**2.5**	**2.6**	**2.5**	**2.1**	**1.8**	**1.9**	**0.0**
Grand Total	**185.8**	**166.6**	**161.2**	**158.6**	**169.5**	**175.8**	**180.1**	**181.4**	**185.2**	**187.6**

Source: Department of Immigration and Citizenship.

Appendix B: Quarterly forecasts and projections of NOM

Quarterly NOM arrivals	2010	2010	2011	2011	2011	2011	2012	2012	2013	2014
'000 of persons	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Jun	Jun
Student	21.7	20.1	18.5	18.7	18.7	18.3	18.1	18.3	18.0	17.8
Subclass 457	7.3	8.1	8.7	9.0	9.3	9.7	10.1	10.4	12.1	13.9
Working Holiday Maker	7.0	7.2	7.5	7.4	7.6	7.5	7.6	7.6	7.6	7.7
Visitor	14.4	15.1	15.8	16.0	15.9	16.1	16.4	16.3	16.3	16.2
Total Temporary	**50.5**	**50.5**	**50.5**	**51.2**	**51.5**	**51.6**	**52.2**	**52.6**	**54.1**	**55.6**
Skilled	12.1	12.1	12.1	12.1	13.4	13.4	13.4	13.4	13.4	13.4
Family	7.8	7.8	7.8	7.8	9.4	9.4	9.4	9.4	9.4	9.4
Humanitarian	2.9	2.9	2.9	2.9	3.1	3.1	3.1	3.1	3.1	3.1
Total Permanent	**22.9**	**22.9**	**22.9**	**22.9**	**25.9**	**25.9**	**25.9**	**25.9**	**25.9**	**25.9**
Australian citizen	17.4	14.1	20.7	4.7	17.0	13.8	20.3	4.6	4.5	4.4
New Zealand citizen	11.9	8.3	16.1	4.9	12.0	8.4	16.4	5.0	5.1	5.1
Other	7.8	7.6	7.2	6.2	7.7	7.4	6.9	5.8	5.5	5.2
Total Other	**37.0**	**29.9**	**44.0**	**15.8**	**36.8**	**29.6**	**43.5**	**15.4**	**15.1**	**14.7**
Grand Total	**110.4**	**103.3**	**117.3**	**89.8**	**114.3**	**107.2**	**121.7**	**94.0**	**95.0**	**96.2**
Quarterly NOM departures	**2010**	**2010**	**2011**	**2011**	**2011**	**2011**	**2012**	**2012**	**2013**	**2014**
'000 of persons	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Jun	Jun
Student	-18.0	-16.6	-15.3	-12.4	-14.7	-14.4	-14.3	-14.4	-14.2	-14.1
Subclass 457	-2.8	-3.1	-3.3	-3.4	-3.6	-3.7	-3.8	-4.0	-4.6	-5.3
Working Holiday Maker	-2.5	-2.6	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.8
Visitor	-15.1	-11.5	-10.4	-10.6	-10.4	-10.6	-10.8	-10.8	-10.7	-10.7
Total Temporary	**-38.4**	**-33.8**	**-31.8**	**-29.1**	**-31.4**	**-31.4**	**-31.7**	**-31.9**	**-32.3**	**-32.8**
Skilled	-0.8	-0.8	-0.8	-0.8	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
Family	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
Humanitarian	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Permanent	**-1.3**	**-1.3**	**-1.3**	**-1.3**	**-1.5**	**-1.5**	**-1.5**	**-1.5**	**-1.5**	**-1.5**
Australian citizen	-18.3	-22.7	-18.1	-19.4	-17.9	-22.3	-17.7	-19.1	-18.7	-18.3
New Zealand citizen	-1.3	-6.2	-1.1	-1.5	-1.8	-6.7	-1.8	-2.1	-2.3	-3.2
Other	-8.6	-9.8	-8.5	-8.6	-8.2	-9.5	-8.1	-8.3	-8.0	-7.7
Total Other	**-28.2**	**-38.7**	**-27.7**	**-29.6**	**-27.9**	**-38.5**	**-27.7**	**-29.5**	**-29.0**	**-29.2**
Grand Total	**-67.9**	**-73.8**	**-60.7**	**-59.9**	**-60.8**	**-71.4**	**-60.8**	**-62.8**	**-62.8**	**-63.5**
Quarterly net NOM	**2010**	**2010**	**2011**	**2011**	**2011**	**2011**	**2012**	**2012**	**2013**	**2014**
'000 of persons	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Jun	Jun
Student	3.7	3.5	3.2	6.3	4.0	3.9	3.8	3.9	3.8	3.7
Subclass 457	4.5	5.0	5.4	5.6	5.8	6.0	6.2	6.4	7.5	8.6
Working Holiday Maker	4.5	4.6	4.8	4.8	4.9	4.8	4.9	4.8	4.9	4.9
Visitor	-0.7	3.6	5.4	5.5	5.4	5.5	5.6	5.6	5.6	5.6
Total Temporary	**12.1**	**16.7**	**18.8**	**22.1**	**20.1**	**20.2**	**20.5**	**20.8**	**21.7**	**22.8**
Skilled	11.4	11.4	11.4	11.4	12.6	12.6	12.6	12.6	12.6	12.6
Family	7.3	7.3	7.3	7.3	8.8	8.8	8.8	8.8	8.8	8.8
Humanitarian	2.9	2.9	2.9	2.9	3.1	3.1	3.1	3.1	3.1	3.1
Total Permanent	**21.6**	**21.6**	**21.6**	**21.6**	**24.5**	**24.5**	**24.5**	**24.5**	**24.5**	**24.5**
Australian citizen	-0.9	-8.7	2.6	-14.8	-0.9	-8.5	2.5	-14.5	-14.2	-13.9
New Zealand citizen	10.5	2.1	15.0	3.4	10.2	1.8	14.5	2.9	2.7	2.0
Other	-0.8	-2.2	-1.3	-2.5	-0.4	-2.1	-1.2	-2.5	-2.5	-2.5
Total Other	**8.8**	**-8.8**	**16.3**	**-13.8**	**8.9**	**-8.9**	**15.9**	**-14.1**	**-14.0**	**-14.5**
Grand Total	**42.5**	**29.5**	**56.6**	**29.9**	**53.5**	**35.8**	**60.9**	**31.1**	**32.2**	**32.8**

Source: Department of Immigration and Citizenship.

Appendix C: Concepts and methodology

Components of NOM

Net overseas migration has three key components:

- **Permanent entrants** sourced from the permanent Migration Program and Australia's Humanitarian Program, which include the Skilled, Family and Humanitarian visa groups. These programs are capped annually by government policy.

- **Temporary entrants** include Students, subclass 457 (business long stay), Working Holiday Makers, and long term visitors. This part of NOM is largely uncapped and driven by factors such as the economy. Nevertheless, the government can exercise integrity and other measures which can affect this component of NOM.

- **Other entrants** include Australian citizens and New Zealand citizens, as well as people on bridging and other visas. This component of NOM is uncapped. Australian citizens do not require a visa to enter or exit Australia. New Zealand citizens can enter, reside and work in Australia freely under the Trans-Tasman travel arrangements. Their movements are affected by the differential economic performance and labour market conditions of Australia and New Zealand. Other visas that have a smaller impact on NOM include residents returning to Australia (that is, non Australian citizens who are permanent residents).

Forecasting and projecting NOM

The NOM forecasting and projection framework combines historical data on visa grants with past behaviour of migrants across different visa groups, the impact of existing policy reforms, and also incorporate official forecasts of future economic conditions.

Visa grants from outside Australia by major visa group are sourced from the department's internal data. The analysis uses visas granted outside Australian (rather than in Australia) as these are most likely to contribute to NOM (see Chart 10 above).

Propensities to enter into NOM are applied to these grants from outside Australia to estimate NOM arrivals, based on historical behaviour of migrants across different visa classes. The department's internal data identify and track an individual from visa grant, to arrival in Australia, to subsequent stay and possible departure. The data can be used to follow a large cohort of migrants across time to develop meaningful average propensities to enter NOM. The data go back to 2004, allowing the reporting of five year propensities to enter NOM. This approach is broadly consistent with work underway for the department by Peter McDonald and Jeromey Temple from the Australian National University.

The combined Year 5 propensities by major visa group are outlined in Table C.1 below. As more data become available, these propensities are updated to reflect the most recent changes in behaviour.

Table C.1: Propensities to enter NOM

	Year 1	Year 2	Year 3	Year 4	Year 5	Combined
Skilled	55.1%	7.9%	4.8%	2.4%	0.5%	70.7%
Family	76.2%	3.2%	1.8%	0.8%	0.1%	82.1%
Humanitarian	95.8%	1.1%	0.2%	0.1%	0.0%	97.3%
Students - Higher Education	74.0%	1.7%	0.6%	0.3%	0.1%	76.7%
Students - Vocational Education	96.0%	1.7%	0.6%	0.3%	0.1%	98.7%
Students - Other	36.4%	1.5%	0.6%	0.3%	0.1%	38.9%
Subclass 457	62.4%	1.2%	0.5%	0.3%	0.0%	64.5%
Visitors	1.0%	0.4%	0.4%	0.2%	0.0%	2.1%
Working Holiday Maker	15.2%	1.1%	0.9%	0.5%	0.1%	17.8%

Source: Department of Immigration and Citizenship.

These five year propensities are applied to the existing data for visa grants from outside Australia to

estimate the likelihood of a visa group counting for NOM purposes. It is important to apply these propensities as not all visa grants translate to arrivals and not all arrivals stay long enough to be counted into NOM. For example, a high proportion of permanent migrants enter NOM compared to a very low proportion for tourists and visitors.

The propensities are applied to visa grants outside Australia each successive quarter by visa category to estimate its impact on NOM arrivals over a five year period (that said the majority of the activity occurs in the first two years as shown in Table C.1 above. For example, there were 16 285 subclass 457 visa grants from outside Australia in the September 2007 quarter. Applying the propensity of 64.5 per cent this results in an impact on NOM of 10 497 persons, spread over a five year period (Table C.2). This methodology is repeated for all quarters where grants data are available (currently until the end of March 2011).

Table C.2: NOM arrivals by visa by quarter for subclass 457s (part only)

Subclass 457 projected NOM in			1	2	3	4
2007-08	September qtr	Q1	2,913.0			
	December qtr	Q2	2,500.8	2,803.7		
	March qtr	Q3	2,306.9	2,407.0	3,037.3	
	June qtr	Q4	2,434.4	2,220.3	2,607.6	3,941.2
2008-09	September qtr	Q1	56.2	2,343.1	2,405.3	3,383.5
	December qtr	Q2	48.2	54.1	2,538.3	3,121.1
	March qtr	Q3	44.5	46.4	58.6	3,293.7
	June qtr	Q4	46.9	42.8	50.3	76.0
2009-10	September qtr	Q1	24.5	45.2	46.4	65.2
	December qtr	Q2	21.0	23.6	48.9	60.2
	March qtr	Q3	19.4	20.2	25.5	63.5
	June qtr	Q4	20.5	18.7	21.9	33.1
2010-11	September qtr	Q1	15.5	19.7	20.2	28.4
	December qtr	Q2	13.3	14.9	21.3	26.2
	March qtr	Q3	12.3	12.8	16.2	27.7
	June qtr	Q4	13.0	11.8	13.9	21.0
2011-12	September qtr	Q1	2.0	12.5	12.8	18.0
	December qtr	Q2	1.7	1.9	13.5	16.6
	March qtr	Q3	1.6	1.7	2.1	17.5
	June qtr	Q4	1.7	1.5	1.8	2.7
2012-13	September qtr	Q1		1.6	1.7	2.3
	December qtr	Q2			1.8	2.2
	March qtr	Q3				2.3
	June qtr	Q4				
2013-14	September qtr	Q1				
	December qtr	Q2				
	March qtr	Q3				
	June qtr	Q4				
Total			**10,497.4**	**10,103.6**	**10,945.4**	**14,202.6**

Source: Department of Immigration and Citizenship.

The limitation of this method is that it does not adequately reflect any changes in policy that may have occurred after the cohort was granted a visa from outside Australia and entered Australia.

It should also be noted that, because of the no policy change assumption, specific quarterly movements in the permanent categories (Skilled, Family and Humanitarian) are not modelled – though the capability exists to do so. Instead, the NOM contribution is assumed to remain constant over the forecast and projection period, based on the number of visa grants from outside Australia and propensity to contribute to NOM.

Another limitation is that the data time series (since 2004) is not yet long enough to fully assess the likelihood of individuals departing from NOM. As a result, historical ratios of leaving NOM compared to total NOM by visa category are used to estimate the likelihood or propensity of departing from NOM (Table C.3).

This Department of Immigration and Citizenship methodology is a simplified version of what the ABS currently does to estimate preliminary NOM. These ratios are applied to the proportion of grant cohorts from outside Australia who have entered into NOM and generate NOM outflows.

Table C.3: Propensities to leave NOM

	Combined
Skilled	6.6%
Family	6.5%
Humanitarian	2.6%
Students - Higher Education	33.1%
Students - Vocational Education	33.1%
Students - Other	33.1%
Subclass 457	38.1%
Visitors	50.6%
Working Holiday Maker	35.9%

Source: Department of Immigration and Citizenship.

The propensities in Table C.3 are then applied to each cohort who entered NOM, for example in Table C.2 above. So of the 10 497 persons who entered NOM as subclass 457 visa holders (that is for the five years ending June 2011 – see Table C.2 above), 4 003 (or 38.1 per cent) are assumed to leave NOM (Table C.4). This makes for an estimated net impact on NOM of 6 494 persons over five years arising from the September 2007 quarter subclass 457 visa grants. The same process is repeated for each quarter for each visa group.

Table C.4: NOM departures by visa by quarter for subclass 457s (part only)

Subclass 457 projected NOM out			1	2	3	4
2007-08	September qtr	Q1	1,110.8			
	December qtr	Q2	953.6	1,069.1		
	March qtr	Q3	879.6	917.8	1,158.2	
	June qtr	Q4	928.3	846.6	994.3	1,502.8
2008-09	September qtr	Q1	21.4	893.4	917.2	1,290.2
	December qtr	Q2	18.4	20.6	967.9	1,190.1
	March qtr	Q3	17.0	17.7	22.3	1,255.9
	June qtr	Q4	17.9	16.3	19.2	29.0
2009-10	September qtr	Q1	9.3	17.2	17.7	24.9
	December qtr	Q2	8.0	9.0	18.7	22.9
	March qtr	Q3	7.4	7.7	9.7	24.2
	June qtr	Q4	7.8	7.1	8.4	12.6
2010-11	September qtr	Q1	5.9	7.5	7.7	10.8
	December qtr	Q2	5.1	5.7	8.1	10.0
	March qtr	Q3	4.7	4.9	6.2	10.6
	June qtr	Q4	4.9	4.5	5.3	8.0
2011-12	September qtr	Q1	0.8	4.8	4.9	6.9
	December qtr	Q2	0.7	0.7	5.2	6.3
	March qtr	Q3	0.6	0.6	0.8	6.7
	June qtr	Q4	0.6	0.6	0.7	1.0
2012-13	September qtr	Q1		0.6	0.6	0.9
	December qtr	Q2			0.7	0.8
	March qtr	Q3				0.9
	June qtr	Q4				
2013-14	September qtr	Q1				
	December qtr	Q2				
	March qtr	Q3				
	June qtr	Q4				
Total			4,002.8	3,852.6	4,173.6	5,415.6

Source: Department of Immigration and Citizenship.

The forecasts are also compared against historical data from the ABS each quarter (in particular final NOM data) to ensure they are consistent. As historical data become available they are fed in to the time series and used to benchmark the forecasts.

As noted above, these propensities to arrive and depart from NOM can estimate the impact of a visa grant cohort over five years. That said, most of the activity in terms of entering NOM or leaving NOM occurs within the first one to two years after which there is a relatively low likelihood to contribute to NOM. This means that we can have the greatest confidence in the first and second year forecasts as they are largely based on historical data.

Beyond this period, NOM arrivals and departures need to be projected by also projecting visa grants outside Australia and then applying the propensities to NOM in and NOM out. Grants are projected in light of the policy an economic parameters around NOM.

- For example, grants to the permanent and capped components of NOM (skilled, family and humanitarian visas) are aligned with the most recent policy announcements and afterward held constant based on a no policy change assumption.

- Grants to the uncapped components of NOM (for example subclass 457 visas and Working Holiday Makers) are projected in line with official economic and labour market forecasts and projections from the Department of Treasury as published in the Budget papers. For example if the unemployment rate is projected to fall then inversely subclass 457 visa applications are projected to increase.

- Other grants which may be less sensitive to the economic environment (for example Student visas) are projected in line with average historical trends and taking into account already announced policy changes.

Propensities are not readily available for Australian citizens, New Zealand citizens and some other minor visa groups using this method. As a result, their contribution to NOM is modelled using past quarterly trends and taking into account official economic forecasts. For example, if the Australian GDP growth increases, this is likely lead to greater arrivals from New Zealand. A lag of 12 months is assumed between a change in GDP and its impact on NOM. Conversely, if global GDP growth increases it is likely that more Australians will leave the population.