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## Can the Eastern Caribbean Currency Union Afford to Grow Old?

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## IMF Working Paper

Western Hemisphere Department

### Can the Eastern Caribbean Currency Union Afford to Grow Old?

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#### Abstract

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The demographic transition in the Eastern Caribbean Currency Union (ECCU) now underway is rapid compared with international experience, and emigration is playing a particularly large role. This paper describes and quantifies several factors which could magnify the challenge of pension reform. First, for some ECCU countries, continued emigration at historical rates would considerably advance the projected date at which pension scheme assets are depleted. Second, there is a significant risk that assets will underperform, given the large exposures to the highly-leveraged public sector and to a lesser extent the record with private sector investments. Third, portfolio diversification away from the public sector could be complicated by age-related pressure for greater central government health spending.

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## I. INTRODUCTION

The demographic transition in the Eastern Caribbean Currency Union (ECCU) displays unusual characteristics.<sup>2</sup> The transition now underway is rapid compared with international experience, and emigration is playing a particularly large role (Figure 1). Rasmussen and Roache (2007) found that the pension schemes in some ECCU countries are unsustainable, based upon recent actuarial reviews, and require significant reforms to place them on a sustainable path (Figure 2). By 2060, ECCU pension funds' expenditure will exceed contributions by over 6.2 percent of GDP, based on pension funds' actuarial projections.<sup>3</sup>

This paper describes and quantifies several factors which could magnify the challenge of pension reform. First, for some ECCU countries, continued emigration at historical rates would considerably advance the projected date at which pension scheme assets are depleted (Section II). Second, there is a significant risk that assets will underperform, given the large exposures to the highly-leveraged public sector and to a lesser extent the record with private sector investments (Section III). Third, portfolio diversification away from the public sector could be complicated by age-related pressure for greater central government health spending (Section IV). Policy recommendations are presented in Section V.

## II. EMIGRATION AND SUSTAINABILITY

High rates of emigration from the ECCU have significant implications for the sustainability of pension schemes. A large proportion of the Caribbean labor force had emigrated to the OECD during 1970–2000, based on OECD members' census data (Figure 3). ECCU members accounted for five of the top ten countries in the world ranked by the proportion of the population that has emigrated. For example, Dominica's population actually declined according to its own 1991 and 2001 censuses.<sup>4</sup>

Large scale emigration by economically-active workers worsens the dependency ratio.<sup>5</sup> In the case of Grenada, the loss of 54 percent of the labor force through emigration to the OECD, as shown in Figure 3, implies that the dependency ratio is 35 percent higher than it would have been with no emigration.

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<sup>2</sup> In this paper, the ECCU refers to the six independent states of Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines.

<sup>3</sup> These are International Labor Organization (2005; 2004a; 2004b) for St. Lucia, Grenada, and St. Kitts and Nevis; by Veira (2005) for St. Vincent and the Grenadines; findings by IMF's Fiscal Affairs Department for Antigua and Barbuda, Dominica (and Horizonow (2005)), and for St. Vincent and the Grenadines (and Veira (2005)). Pension schemes for civil servants are excluded from the analysis below. This paper incorporates information available as of October 2008.

<sup>4</sup> See ILO (2003).

<sup>5</sup> Defined as the ratio of the economically-inactive population to the economically-active population.

Actuarial projections in the ECCU are particularly sensitive to the assumed rate of future emigration.<sup>6</sup> Actuarial reviews in most ECCU members have estimated emigration during 1991-2001 as the residual change in population between the 1991 and 2001 national censuses, after adjusting for births and deaths during that period. In all cases, the baseline actuarial projections assume that the rate of emigration which based on the actuary's judgment may differ from the estimated rate during 1991-2001 slows moderately over time.

Estimating migration during 1991-2001 as the residual change in population, after adjusting for births and deaths, is problematic. For instance, the above approach for St. Kitts and Nevis implies annual net in-migration of 90 persons during 1991–2001. The residual by its nature captures not only migration but also any weaknesses in census, birth, or death data.

OECD census data, which record a foreign-born resident's country of origin, provide an alternative method of estimating emigration from the ECCU. Below, emigration is estimated as the stock of immigrants in 2000, assumed to have arrived during the previous 30 years, and calculating the average flow of emigration on that basis. Figure 4 compares the various approaches.<sup>7</sup> The last approach will be referred to below as the "historical OECD rate."

Constant emigration at the historical OECD rate would imply a stronger demographic transition for most ECCU countries than predicted in actuarial reviews. Under this assumption, the ECCU labor force with constant emigration is 15 percent lower by 2050 than under the actuarial projection (Figure 5).

In a scenario with constant emigration at the historical OECD rate, pension scheme assets are depleted earlier (Figure 6).<sup>8</sup> It can be argued that this assumption is pessimistic, to the extent that ECCU emigration rates have historically been so high that they must at some point decline. In another sense, however, the projection can be seen as optimistic, since the ECCU's emigrants have been disproportionately highly educated and therefore higher than average contributors to pension schemes (Mishra 2006).

### III. ASSET RETURNS AND PORTFOLIO ALLOCATION

ECCU pension schemes have unusually high exposures to the public sector (Figure 7). Thus, understanding the potential for underperformance of claims on the public sector and its implications is essential. Large public sector exposure is a concern, as public sector debt

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<sup>6</sup> The assumption is stated in terms of the "net emigration rate," that is, the rate of emigration net of immigration.

<sup>7</sup> Yet another approach, calculating the change in the stock between 1990 and 2000 OECD censuses, would imply even higher rates of emigration for all ECCU countries but Dominica.

<sup>8</sup> The baseline projection for Dominica in Figure 6, prepared by the IMF's Fiscal Affairs Department, predicts that asset depletion will take place in 2033. The ninth actuarial review (Horizonow (2005)) predicts that asset depletion will take place in 2038.

ratios in the ECCU are among the highest in the world (IMF 2008). An implicit assumption of asset depletion projections is that pension funds can draw down claims, including those on the public sector, to zero, and this may not be the case. For example, Antigua and Barbuda's central government is not paying debt service to its pension scheme, was in arrears on its contributions as an employer during 2004–07, and in February 2008 proposed writing off or restructuring its debt to the pension scheme. Grenada's central government was in arrears on debt service to its pension fund until the 2005 debt restructuring, as part of which the pension fund received a haircut (that is, wrote down the value of its claims on the government). Grenada's government is now current on debt service falling due, i.e., with interest on restructured debt at a rate of one percent. Dominica's central government was also in arrears on debt service until a debt restructuring in 2005, as part of which the pension fund also received a haircut. Arrears have not been an issue in other ECCU members. However, the large share of the public sector in pension scheme portfolios in St. Kitts and Nevis (87 percent) and St. Vincent and the Grenadines (79 percent) leaves pension schemes exposed if public sector difficulties ever do arise.

The performance of some other assets has also been unsatisfactory. These include a housing project and mortgages in Antigua and Barbuda; airport and water authorities in Grenada; a car park, mortgages, and leases on government buildings in St. Lucia; and restructured claims on the Government of Belize in St. Vincent and the Grenadines.<sup>9</sup>

A useful indicator is therefore the date by which private, performing assets are depleted, ignoring public or nonperforming assets. Maintaining the previous section's assumption of constant emigration, Figure 6 shows the date by which private performing assets are depleted. This indicator is particularly relevant for Antigua and Barbuda, given the public sector's arrears to the pension fund; in the absence of fiscal initiatives, by 2011 the pension fund will be unable to cover expenditures without transfers from the central government, whether as debt service or otherwise.<sup>10</sup> This could force a fiscal adjustment if pension arrears are to be avoided.

#### IV. OTHER AGE-RELATED SPENDING

The impact of demographics on pension spending can usefully be placed in the context of trends in other age-related spending on health and education.<sup>11</sup> Spending pressures in these areas raise the risk that pension fund surpluses generated by parametric reforms could be used to finance central government deficits rather than to diversify portfolios. Although the

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<sup>9</sup> Pension fund financial statements do not provide sufficient detail to calculate the rate of return on nonpublic assets based on interest received rather than interest earned.

<sup>10</sup> Since January 2008, the cashflow of the pension fund has improved as the government is now paying its monthly contributions as an employer.

<sup>11</sup> A study of age-related spending in the European Union found that population aging will increase costs on pensions, health care, and long-term care by more than it will reduce spending on education and unemployment benefits (Economic Policy Committee and European Commission 2006).

ECCU has set fiscal benchmarks for reducing central government debt and deficits, there has been limited progress in achieving these. In this context, this section assesses the impact of population aging in the ECCU on age-related budgetary expenditures on health and education, which were larger than pension scheme expenditure during 2004–06 (Figure 8 and Tsounta 2007).<sup>12</sup>

The net budgetary impact of aging during 2006–50 is to increase spending under plausible assumptions on spending trends. The projection below will assume: (1) education spending per youth (as a percent of GDP) remains constant;<sup>13</sup> and (2) health spending per elderly person (as a percent of GDP) remains constant.<sup>14</sup> A breakdown by age group of the ECCU's budgetary spending on health care is not available. The projection below will therefore incorporate optimistic and pessimistic scenarios, in which annual health spending per elderly person is twice and five times spending per working age person respectively, reflecting the observed ratios in the United Kingdom and Germany.<sup>15</sup>

Even in the optimistic scenario, the decline in education spending as the population ages (1.4 percent of GDP) is offset by the increase in health spending (1.8 percent of GDP) (Figure 9). In the pessimistic scenario, the increase in health spending (3.2 percent of GDP) far exceeds the decline in education spending. The increase in pension spending of 5.6 percent of GDP dominates in either case.

## V. POLICY RECOMMENDATIONS

The factors identified above could magnify the challenge of ECCU pension reform and heighten the need for early action to address sustainability issues. Continued emigration at the historical OECD rate would advance the date by which pension fund reserves are depleted, and usable reserves would be depleted even sooner if the public sector has difficulty meeting its large debt service obligations.

The reforms implemented in St. Lucia in 2003 and Dominica in 2007 indicate that these challenges can be tackled:

- In Dominica, reforms included: increasing the minimum pension age by 1 year every three years up until 65; increasing the employee and employer contribution rates by 1 percentage point each; increasing the contribution ceiling from EC\$1,000 to

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<sup>12</sup> All spending by Ministries of Health and Education are included, due to data limitations, and includes some spending that is not related to health or education.

<sup>13</sup> In the ECCU, primary education to ages 12–14 is compulsory, while entrance to higher grades is selective.

<sup>14</sup> In the ECCU, government mandates to provide health care are broadly stated, with an evolving practice as to which treatments and medicines are covered.

<sup>15</sup> See Honjo (2006) and Federal Statistical Office Germany (2004).

EC\$6,000 per month; and increasing the number of highest-earning years used in the calculation of the final insurable wage from 3 to 10 years.

- In St. Lucia, reforms included: increasing the minimum pension age by 1 year every three years up until 65; increasing the minimum number of years required for a pension from 10 to 12 years; and reducing the maximum pension from 65 percent to 60 percent of the average insurable wage.

The recommendations of actuarial reviews and the IMF's Fiscal Affairs Department (FAD) provide a roadmap for other ECCU members to address these challenges. Parametric reforms could include: gradually raising the retirement age from 60 years (62 for St. Vincent and the Grenadines) to 65 years; increasing contribution rates, which are low by regional standards, as well as contribution ceilings; reducing pension accrual rates; and increasing the number of years over which the insurable wage is determined.

However, parametric reforms could fail unless supported by public sector adjustment and portfolio diversification. In the past, pension schemes have provided a captive source of financing for the budget and broader social objectives. This financing has relaxed governments' budget constraints, and contributed to the ECCU's unusually high debt levels. Parametric reforms will generate pension scheme surpluses, which should be used not to further relax budget constraints but to diversify social security scheme assets away from the public sector.

The concentration of pension scheme assets in the public sector reflects in part the regional emphasis on public investment as a catalyst for economic growth and development. The weak record of public investment in promoting growth, as described by Roache (2007), strengthens the case for diversification from public to private sector assets, and for limiting investments in the domestic public sector to government bonds.

As pension schemes diversify away from public sector assets, the performance of private sector assets could become a greater issue. Pension schemes could take advantage of commercial banks' comparative advantage in allocating resources by limiting domestic private sector investments to placing deposits through banks, and by no longer limiting its deposits to those of locally-owned commercial banks. Less emphasis could be given to mortgage lending and other direct private lending, particularly in competition with the private sector. This would also reduce administrative costs, which are high compared with other countries, at the same time that asset returns are increased.

There are a number of reasons to increase the share of international assets in portfolios, while maintaining an appropriate risk-return profile.<sup>16</sup> This would diversify risk, which is particularly important given the countries' vulnerability to natural disasters. In addition, the asset performance issues discussed above could indicate that the limited domestic capacity to absorb pension scheme assets may have already been exceeded.

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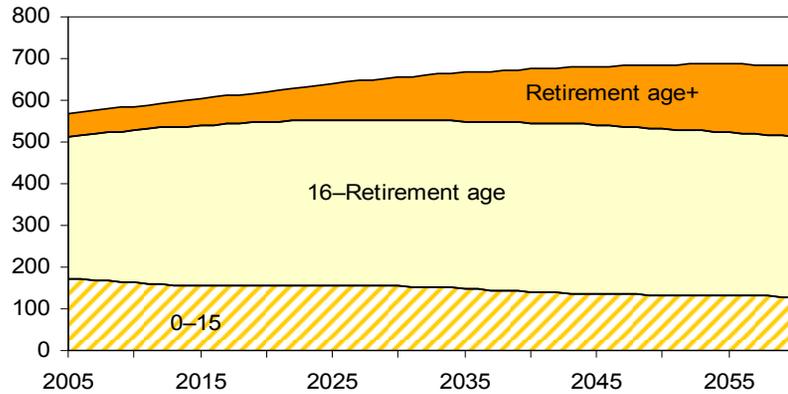
<sup>16</sup> This is particularly important in light of recent turmoil in international financial markets.

There is a case for creating a common investment pool to manage international and possibly domestic assets. A common pool could allow fixed costs to be shared, while allowing asset managers to focus on maximizing returns. The pool might be managed by a private firm or by the Eastern Caribbean Central Bank, which already manages sinking funds on behalf of ECCU members.<sup>17</sup>

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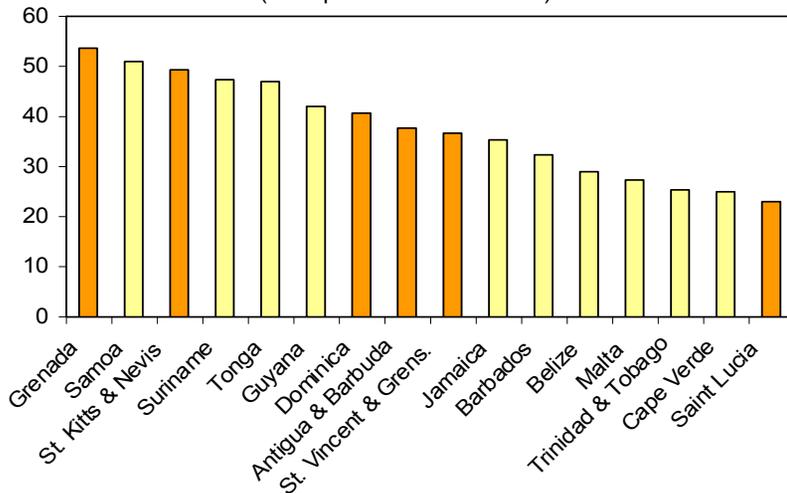
<sup>17</sup> For a discussion of selected countries' efforts to upgrade their public pension schemes' investment frameworks and to strengthen their governance structure, see Vitas et al (2008).

Figure 1. ECCU: Demographic Profile, 2005–60  
(Thousands of persons)



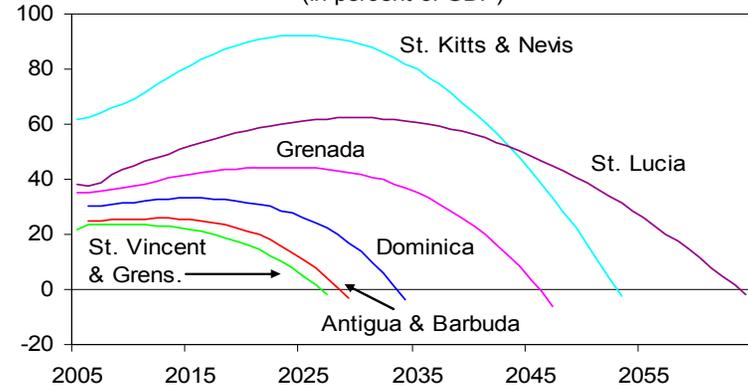
Sources: Actuarial reviews; and Fund staff estimates.

Figure 3. Countries with the Largest Emigration to OECD, 1970–2000  
(As a percent of labor force)



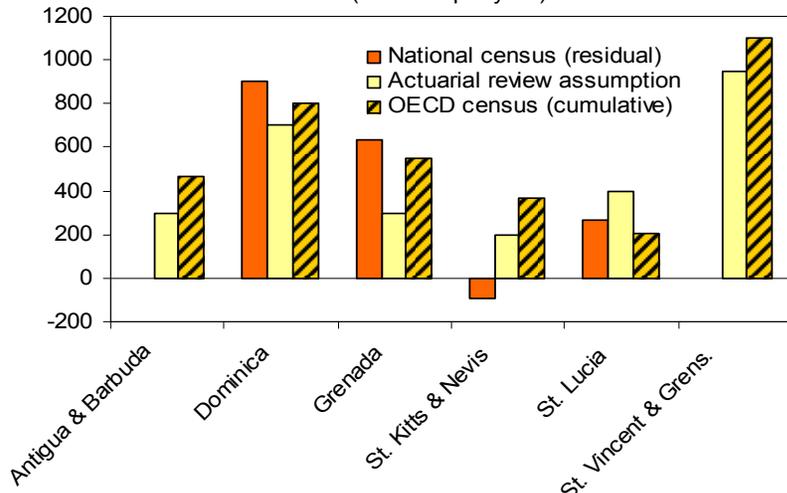
Source: Docquier and Marfouk (2005), based on OECD census data.

Figure 2. ECCU: Social Security Reserve Assets per Actuarial Reviews  
(In percent of GDP)



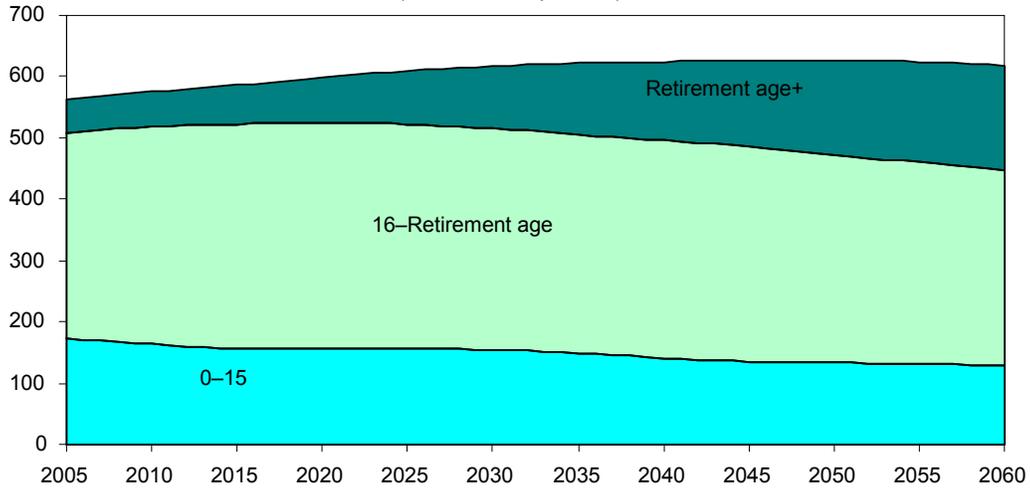
Source: Fund staff estimates and projections, as shown in Roache and Rasmussen (2007).

Figure 4. ECCU: Estimates of Annual Emigration Rates, 2000  
(Persons per year)



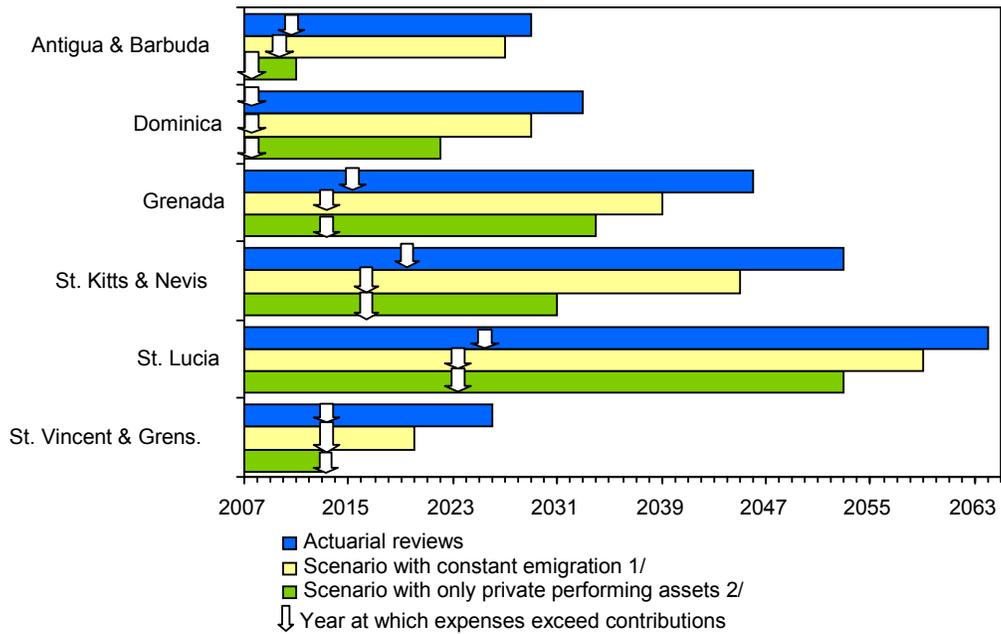
Sources: National census data per actuarial reviews; and OECD census data per Docquier and Marfouk (2005).

Figure 5. ECCU: Demographic Profile with Constant Emigration at the Historical OECD Rate, 2005–60  
(Thousands of persons)



Source: Fund staff estimates.

Figure 6. ECCU: Projected Year of Pension Fund Reserve Asset Depletion

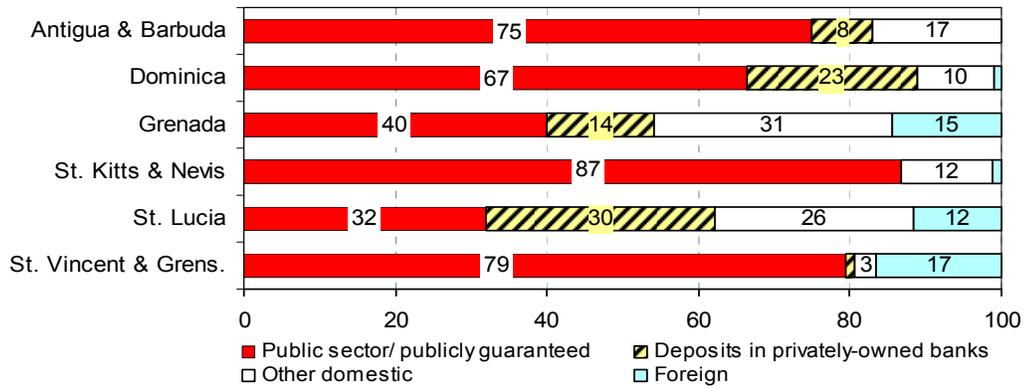


Sources: Actuarial reviews; financial statements; and Fund staff estimates.

1/ See Section II; assumes constant emigration at historical levels implied by OECD census data.

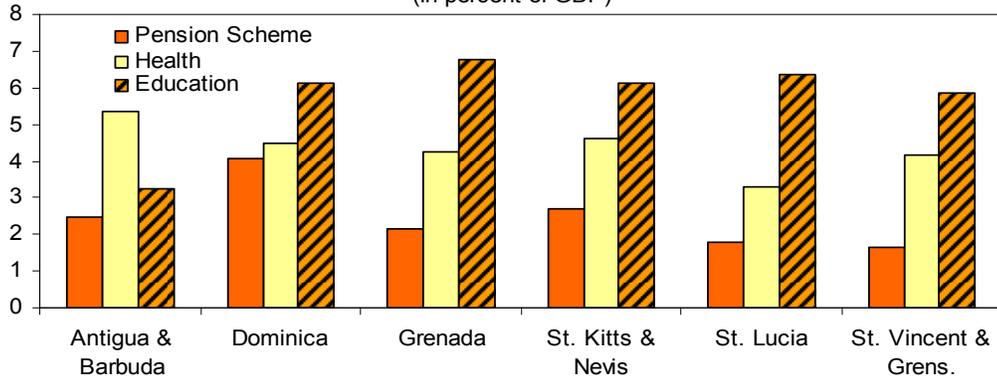
2/ See Section III; the date by which private performing assets are depleted measures the dependence of pension funds on debt service from the public sector.

Figure 7. ECCU: Social Security Reserve Portfolio Asset Allocations (Percent of portfolio)



Source: ECCU social security financial statements.

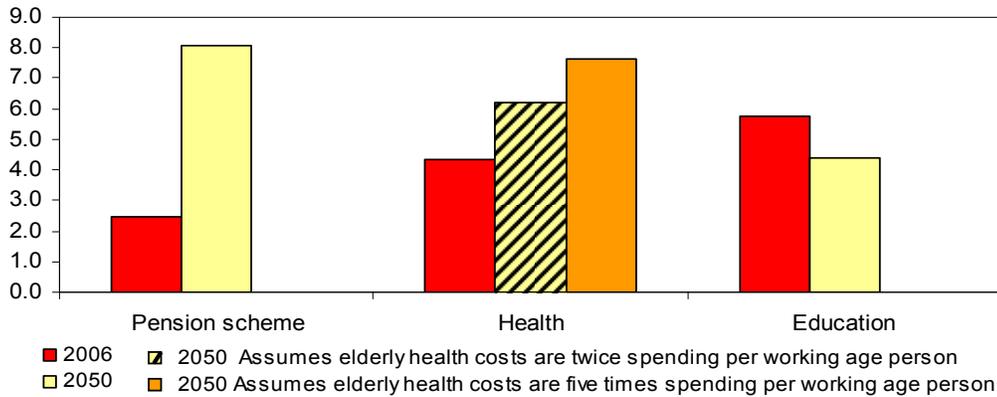
Figure 8. ECCU: Average Age-Related Expenditure, 2004-06 (In percent of GDP)



Sources: Budget submissions to parliaments; and Fund staff calculations.

Note: Spending data for Ministries of Health and Education may include some nonhealth, noneducation expenditure.

Figure 9. ECCU: Costs of Aging, 2006 vs. 2050 (In percent of GDP, at actuarial emigration rates)



Source: Fund staff estimates.

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