

## Impact case study (REF3)

<b>Institution:</b> Brunel University London		
<b>Unit of Assessment:</b> 16 Economics and Econometrics		
<b>Title of case study:</b> Safeguarding private pensions in Caribbean countries		
<b>Period when the underpinning research was undertaken:</b> 2000-2019		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b>	<b>Role(s) (e.g. job title):</b>	<b>Period(s) employed by submitting HEI:</b>
E Philip Davis	Professor	10/2000 - present
<b>Period when the claimed impact occurred:</b> 2015-2018		
<b>Is this case study continued from a case study submitted in 2014?</b> N		

**1. Summary of the impact** (indicative maximum 100 words)

Professor Davis' research has resulted in comprehensive pension reforms in 5 Caribbean countries (Bahamas, Barbados, Guyana, Jamaica, and Suriname) and thus increased retirement income security for vulnerable people in old age. The research has improved pension fund regulators' ability to calculate risks and take appropriate action when detecting difficulties in individual funds or the entire sector. Accordingly, these reforms have increased the scope for prospective retirees to be financially independent and cared for in old age, not least given favourable related developments such as rises in pension fund assets in Jamaica (which has seen a 6% increase of pension fund assets) and in the registration of funds with the supervisory authorities in Barbados (which now has 96% fully registered pension plans).

**2. Underpinning research** (indicative maximum 500 words)

Professor Davis is an expert on pension funds and the economic impact of population ageing. He has published extensively on pension regulation, pension fund finance, and retirement income provision in the last 20 years (Ref. 2; Ref. 3; Ref. 7) and presented on the topic in the UK and the Caribbean (Ref. 1; Ref. 4; Ref. 5).

Pension funds are key financial institutions in many countries, which contribute to the economy and enable individuals to save sufficiently for retirement. However, pension provision is in crisis globally, which jeopardises financial sustainability, care and dignity in old age (Ref. 7). Failure of pension funds can lead to major losses for both current and prospective retirees and widespread poverty in old age. It can also disrupt the financial market, affect the reputation of the country concerned, and reduce the financial and economic development of that country.

Prof. Davis' research found that the ongoing shift from defined benefits (DB) pension schemes (which guarantee a retirement income) to defined contribution (DC) pension schemes (where the retirement income depends on market returns), is a key aspect of the crisis (Ref. 3). Other contributors are turbulence in financial markets and variable accounting standards. Most of these are risks which are generally beyond the scope of regulation.

In 2015, the Association of British Insurers commissioned Prof. Davis to challenge a pension reform proposed by the UK Government (Ref. 4). Prof. Davis found that the proposal, which raised the possibility to move from the EET system (where pension savings and returns are exempt from income tax, but pension income is taxed) to a TEE system (where pension savings would be from taxed income but with no taxation thereafter), would actually be detrimental to the

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UK financial market. The suggested change would lead to a reduction in personal savings, adverse effects on the macroeconomy and a long-term fiscal imbalance.

In 2017, the IMF commissioned Prof. Davis to conduct research on macroprudential indicators (which show authorities system-wide risk) and the development of financial soundness indicators for 36 countries (Ref. 6). Prof. Davis' research showed that it is possible to use Concentration and Distribution Measures (CDMs) (which can capture financial risks within the banking sector) to predict system-wide vulnerabilities, with appropriate control variables. These can also be used in the pension sector: by generating health and stability indicators for individual pension funds, authorities can calculate CDMs and detect risks.

A key aspect of Prof. Davis' research on pension funds has focused on pension regulation and international investment of pension funds in the Caribbean. From 2015 to 2017, the IMF's Caribbean Technical Assistance Centre (CARTAC) commissioned Prof. Davis to research and advise on the calculation of financial health and stability indicators for pension policy in 5 Caribbean countries: Bahamas, Barbados, Guyana, Jamaica, and Suriname.

The Caribbean is not exempt from the global issues for pensions and faces regulatory challenges regarding pension management. Only a low percentage of the population participates in pension funds and especially some of the most vulnerable people (those who are self-employed, unemployed or emigrants) often do not have a pension scheme. This, a lack of personnel satisfactorily trained in finance, and insufficient consumer and regulator knowledge, weakens the pension systems in the Caribbean.

Prof. Davis demonstrated that pension fund authorities in the Caribbean could undertake the creation of health and stability indicators for individual pension funds (Ref. 5), using in that context aspects of the work he had undertaken for the IMF (Ref. 6). In the presentations given in the Caribbean, he showed a set of indicators, which enable regulators to assess the vulnerability of pension funds to standard financial risks (Ref. 2; Ref. 3; Ref. 4; Ref. 5; Ref. 7). He highlighted that these indicators provide a benchmark to supervisors for intervention in case pension funds—or the entire pension sector—are facing difficulties. They can consequently enable supervisors to reflect on the overall health of the sector and intervene appropriately. Prof. Davis further used his research on pension taxation in the UK to illustrate the political risks to which pension funds can be subject.

### 3. References to the research (indicative maximum of six references)

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Ref. 1 **Davis, E. P.** 2002. "Pension fund management and international investment, a global perspective", presented at the Senior Level Policy Seminar, Caribbean Centre for Monetary Studies, Trinidad, 3 May 2002

Ref. 2 **Davis E. P.** & De Haan, L. 2012, 'Pension fund finance and sponsoring companies,' *Journal of Pension Economics and Finance* 11, 439-463.  
<https://doi.org/10.1017/S1474747212000030>

Ref. 3 **Davis E. P.** 2014. "Evolving Roles for Pension Regulations," in Mitchell, O.S., Maurer, R., Hammond, P.B. (eds.) *Recreating Sustainable Retirement: Resilience, Solvency, and Tail Risk*, 163-185. [10.1093/acprof:oso/9780198719243.001.0001](https://doi.org/10.1093/acprof:oso/9780198719243.001.0001)

Ref. 4 Armstrong A., **Davis E. P.** & Ebell, M. 2015, 'An economic analysis of the existing taxation of pensions (EET) versus an alternative regime (TEE),' National Institute of Economic and Social Research Discussion Paper 455.  
<https://www.abi.org.uk/globalassets/sitecore/files/documents/publications/public/2015/pension/tax-relief/abi-consultation-response-niesr-macro-analysis.pdf>

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Ref. 5 **Davis, E. P.** 2016, 'Developing financial health and stability indicators for the pension fund sectors in Caribbean countries,' presented at the CARTAC-BOJ Financial Soundness, Macro-Prudential and Real Estate Indicators Conference, Kingston, Jamaica, 10-14 October 2016. <https://bura.brunel.ac.uk/bitstream/2438/20487/1/FullText.pdf>

Ref. 6 **Davis, E. P.** 2017, 'Evaluating Concentration and Distribution Measures of IMF Financial Soundness Indicators,' Brunel Economics and Finance Working Paper 17-23. <https://www.brunel.ac.uk/economics-and-finance/research/pdf/1723.pdf>

Ref. 7 **Davis, E. P.** & Lastra, R. 2018. "Pension provision, lifetime financial sustainability, care and dignity in old age: legal and economic issues," in Antonio Argandoña (ed.) *The Home: Multidisciplinary Reflections*, 144-160. [10.4337/9781786436573](https://doi.org/10.4337/9781786436573)

**4. Details of the impact** (indicative maximum 750 words)

Prof. Davis' research on pension fund management and regulation has led to crucial policy changes at CARTAC and the 5 Caribbean countries concerned which CARTAC advises, and thereby protected retirement income security for vulnerable people in old age.

On the basis of Prof. Davis' research, CARTAC recommended reforms of pension fund regulation in the Bahamas, Barbados, Guyana, Jamaica, and Suriname to improve both operational issues (such as improvement of data collection from pension funds) and strategic level approaches (such as the implementation and analysis of health and stability indicators that highlight pension fund risks). The reform included a new statistical reporting template that increased the level of information among supervisors; the introduction of a suite of health and stability indicators (which highlight the risks to which pension funds are subject); and development of reporting and regulatory approaches.

CARTAC confirms that the Caribbean nations fully accepted the recommendations and adopted the framework for improved pension regulation, as proposed by Prof. Davis. [REDACTED]

[REDACTED] This has a fundamental human welfare factor given the fact that pension assets in these countries account for a significant proportion of the GDP and cover a sizeable proportion of the workforce. For example, the Jamaican pension fund has 115,000 members (10% of the employed labour force) with assets equivalent to 26% of GDP. In Barbados, there are 30,000 members of registered plans (20% of the workforce) and assets equivalent to around 42% of GDP.

The Financial Services Commission Barbados [REDACTED] the Commission was able to increase the number of pension plans registered under the country's Occupational Pension Benefits Act (OPBA) and went from 145 pension plans in 2014 to 268 in 2017 (Source 3). This means there are now 96% fully registered active pension plans in Barbados whose risks can thus be supervised appropriately.

The Central Bank of the Bahamas [REDACTED] Annual Report & Statement of Accounts 2016 confirms that the Pension Division revamped their statistics survey and improved staff training regarding the development and maintenance of key financial health and stability indicators for the pension sector ([REDACTED], Source 5). The Bank can now flag up risks within the pension sector more strategically and has greatly improved their surveillance over the pension fund sector in the Bahamas.

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The Bank of Guyana also changed their pension fund-reporting template, which gave way to more effective monitoring of financial trends. [REDACTED] In 2018, a year after the CARTAC mission, the private pension sector in Guyana “continued to experience consistent growth...with a relatively low...impact to systemic risk” (Source 7). [REDACTED]

The Bank of Jamaica Financial Stability Report 2017 indicates the sectoral development in Pensions since the CARTAC mission: while in 2012, pension fund assets made up 22.4% of the GDP, in 2017 that number stood at 28.2% (Source 8).

The Central Bank of Suriname also adopted the new pension reporting forms and indicators and deployed “the expanded list of indicators in their supervisory and risk management frameworks” (Source 9). Prof. Davis led these changes in regulation and supervisors were able to gain additional knowledge in several key areas of pension, such as challenges facing the pension sector in the region and risks in pension funds ([REDACTED], Source 9). This has enabled them to take regulatory action when detecting potential difficulties in individual funds or the sector as a whole.

Prof. Davis’ research serves as an outstanding example of how effective pension reforms can have a fundamental impact on regulators and thus benefit at-risk people in several countries. His contribution has [REDACTED] benefited some of the most vulnerable people in the Caribbean. The changes in pension data management and supervision have improved retirement income security for both current and prospective pension plan members and thus safeguarded their wellbeing in old age.

**5. Sources to corroborate the impact** (indicative maximum of 10 references)

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Source 1: Letter from the Caribbean Regional Technical Assistance Centre (CARTAC)

Source 2: Letter from the Financial Services Commission Barbados

Source 3: Financial Services Commission Barbados, Annual Report 2016-2017

Source 4: Letter from Central Bank of the Bahamas

Source 5: Central Bank of the Bahamas, Annual Report & Statement of Accounts 2016

Source 6: Letter from the Bank of Guyana

Source 7: Bank of Guyana, Annual Report 2018

Source 8: Bank of Jamaica, Financial Stability Report 2017

Source 9: CARTAC, Annual Report 2017