

## SOCIETY OF ACTUARIES

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### Designing an International Pension Program for Mobile Employees

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Providing an equitable level of retirement income to employees worldwide has always been a challenge. The design of retirement programs must consider the company's philosophy on retirement replacement income and competitive goals in addition to varying tax laws and social security programs of each country.

As companies expand into other countries, the initial employees of the foreign subsidiary are often temporally recruited from the corporate headquarters. These citizens generally relocate to the foreign location to work anywhere from six months to five years. Expatriate agreements are usually provided that guarantee their home country payroll and benefits. Therefore, there is no interruption in their retirement benefit accumulation due to this international assignment.

As business grows in the new country, employees are hired locally. Most companies establish competitive retirement programs for these local employees based on the laws and social security programs of that particular country in conjunction with what the business can afford to provide.

The retirement situation becomes more complex, however, when employees who had been working abroad on expatriate assignments go on to transfer to other countries, working in multiple countries over the course of their career. Many times the company is unable or unwilling to continue to guarantee the home country benefits or the local laws make it difficult for these employees to continue to participant in their home country plans. In these situations, the typical solution has been for these employees to begin participating in the retirement programs of the foreign subsidiaries in which they are currently working.

As the company develops into a multinational company, with more and more local hires in foreign countries, the local employees may began transferring from country to country. For example, county to country transfers are becoming increasingly more common throughout the European community. These employees may eventually participate in the retirement programs of two, three or even more countries. Many times the combined benefits from participating in multiple retirement programs results in a very small total replacement income, as compared to participation in a single retirement program, for the same number of years.

Shortfalls from participating in multiple retirement programs occur for the following reasons:

- Corporate programs do not or cannot recognize another country's service for participation and vesting, or worldwide earnings for benefit accruals.
- Social Security (SS) is not well integrated with the plan in another country.
- There are variations in benefit levels among countries.
- Inappropriate transfer policies are being used for short-term savings.

#### EDS, A Case Study

EDS, a multinational corporation, found itself in this position in the early 1990's. Employees with anticipated shortfalls in their retirement benefits were demanding that the company fix the problem. Potential transferees with specialized and valuable skills who were aware of the possible impact on their retirement benefits were refusing to go on assignments to another country. Therefore, EDS was forced to undertake a study to determine the best approach for addressing this problem.

Unfortunately, due to country-specific differences, including tax and legal requirements, there is no simple uniform approach to addressing these shortfalls on a worldwide basis. In addition, the company may have a history of growth by transitions and acquisitions, which has left a legacy of diverse practices, with less of a common benefits philosophy than might be found in multinational companies that have grown organically.

This paper presents a case study using EDS's experience in designing an international pension program to address retirement shortfalls for internationally mobile employees (IMEs) on a corporate wide basis. Items to be covered include alternative plans considered along the way as well as the final plan design that was approved and implemented.

The goal for EDS was to minimize inequities in retirement benefits due to mobility in the most tax-effective way for both the company and the employee by using existing EDS retirement programs where possible. EDS wanted the plan to be easy to understand, easy to administer and easy to estimate the company's liability.

EDS first needed to identify the employees groups affected. EDS discovered there were a variety of reasons that an employee may work in more than one country with the company over a career. These reasons included:

- Specialized skill needed temporarily by the company
- New business start-up in another country, requiring an executive to temporarily relocate to establish the business
- Employee interested in working in another country, but staying with the same company
- Employee wants to relocate due to personal reasons

Through analysis, two distinct categories of employees emerged at EDS. The first category was the highly paid executive who was asked to accept a temporary assignment in another country. These executives are typically guaranteed home country benefits and are on a formal expatriate package. For these employees, there is no shortfall at retirement as there is no interruption in benefits earned during their career. The second category is employees who worked in multiple countries with EDS for either professional or personal reasons. These employees are on local benefits, payroll and employment agreements in each country and, because of that were in danger of experiencing a shortfall at retirement (see above, for reasons shortfalls occur).

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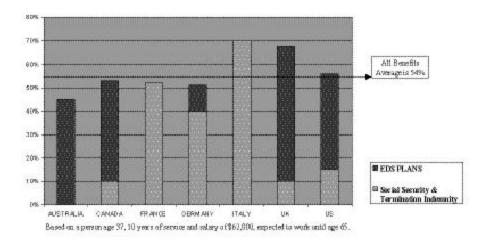
#### **Identifying the Problem**

To understand and address this situation, EDS needed a clear picture of what the benefit at retirement is for a full-career employee as compared to the sum of benefits payable from all retirement programs for these IMEs. A sample population of mobile employees was collected, their retirement benefits analyzed to determine if there were shortfalls, and the possible causes of their shortfalls were determined. A strategy was then developed to minimize the shortfalls.

A representative sample of 69 IMEs was located and their work and retirement history were documented and analyzed. The sample contained 45 U.S. citizens working in other countries and 24 other international employees (in 1993). The average age was 37 with average earnings of approximately US\$64,000. They averaged 10 years of service, with an average of five years in the host country and were expected to have between 30-35 years of service by age 65 (normal retirement age). Most of the U.S. citizens were working in Canada or the UK. Most of the other IMEs were working in the UK or Germany.

To determine if there was a shortfall at retirement from being in more than one pension plan for EDS, a 'target' benefit was derived to compare the total retirement benefits for mobile employees to that of a similar benefit provided to other full-career EDS employees. EDS developed the 'target' by examining the replacement ratios in the various countries where these employees were located and the U.S., where the biggest population of employees is, and determined an average replacement ratio for the company. The replacement ratios determined by country, included company – and country-provided benefits. Using this analysis, it was determined that the retirement income target was approximately 55% of final pay.

**Retirement Income Replacement Ratios** 



EDS then took the sample of people and calculated their projected benefits at retirement (age 65) based on their current work history and assuming they stayed in their current work country, and then compared that with the 'target' to determine the possibility of a shortfall in benefits at retirement. Comparing the sample to a 55% target replacement ratio at retirement, 25% of the sample group would not incur a shortfall.

Some of the causes of shortfalls of the remaining 75% of the sample were due to the fact that many of EDS's individual country retirement programs did not recognize worldwide EDS service and/or earnings for benefit accruals. They only recognized service and earnings during the time the employee was working in that country. So IMEs were treated as if they had terminated EDS when they relocated, and were viewed as a new hire in the country they transferred to, even though they remained continuously employed with EDS. Shortfalls arose from the service-related vesting rules of each EDS pension plan when only the service in that country was recognized. By recognizing all service with EDS for vesting purposes, if a participant leaves a country without being vested, they would grow into the vesting, by continuing to work for EDS. Also shortfalls arose for defined benefit (DB) plans that provided benefits that are related to final average earnings, because the benefit was computed with the earnings at the date of international transfer and was not reflective of subsequent EDS salary increases in the new work country. Amending a final average earnings plan to include worldwide earnings, would allow the participant's benefit to reflect their most recent years of earnings at retirement, which would most likely be their highest, rather than being treated as a vested termination with a frozen benefit (in most cases). Thus, the employee accrues greater benefits than if they left the company and this can be accomplished in a tax-effective way. By amending current plans to recognize worldwide service and earnings with EDS, where possible, another 45% of our sample group no longer showed a shortfall.

The remaining 30% of the sample, showed an anticipated shortfall for a number of reasons and this is the group EDS targeted for the development of an international pension program. The shortfalls for these IMEs may be due to a mismatch of Social Security and EDS retirement plans. Some countries have great SS plans and therefore, the EDS sponsored plan was minimal, as seen with Italy and Germany in the graph above. Other countries, which have little or no SS plans, tend to have richer EDS sponsored plans, as seen with the UK and Australia. So even though the replacement ratio from the EDS plan plus SS plan tended to be between 50 and 60% for a full-career employee in most of the countries, IMEs who transferred from a country with high EDS benefits to a country with low EDS benefits, could experience a shortfall at retirement. Some EDS plans are also integrated with SS, thereby recognizing at least a portion of the benefit that will be provided to a full-career employee moves among countries.

EDS further discovered that inappropriate transfer policies were being offered to some employees in attempts to keep them whole and save company money by not providing them with a full expatriate package. For example, some IMEs stayed in their home country plan but were paid according to local salary grids. This caused their benefit accruals to be very sensitive to fluctuations in currency exchange rates. In some cases, they got bigger accruals than they would have gotten if they were working in their home country, but the opposite also happened. That is, after they transferred, their local salary converted to their home country currency plummeted due to exchange rate fluctuations. There were also some inappropriate verbal promises made to some IMEs employees that later could not be substantiated, or required payments to be made outside of the formal plans. A corporate guideline rather than ad hoc program was needed so managers would know how to guide their employees through a cost-effective transfer for both parties without having to rely on individual agreements.

#### Alternative Approaches Considered

Once EDS defined the group of IMEs with possible shortfalls, possible ways of making up the shortfall were studied. Local plan coverage assures that all employees of a country are treated equally. Allowing mobile employees to participate in local plans, where they exist, is a tax-effective idea that is beneficial for employees planning on retiring in that host country because they accrue benefits useful to them in the future. However, gaps may still exist because of work countries without plans and even where there are plans, they may not be there long enough to vest, or may earn very low benefits due to their short service in that country.

Keeping IMEs in their home country plan when they are working in another country can cause legal and tax problems due to their not working in that home country and/or not being on the home country's payroll. The participant may be taxed on benefits earned and the country may not be able to take a tax deduction on the employee's accruals. Parent company plan coverage may cause tax or currency exchange control problems. There may also be legal penalties in some countries if coverage is affected with an insurer not registered to transact business in that country.

There are a number of approaches for addressing retirement shortfalls for IMEs being used, but there is no easy solution due to the complexity of legal and tax considerations in each country involved. EDS determined that any plan implemented had to be non-qualified because of the difficulty in designing a plan that would meet the tax qualification requirements of each country. Some companies provide protection on an individual basis, such as through a special agreement, guaranteeing employees a certain level of benefits at retirement or some make plan eligibility based on a case-by-case determination. Others have a pension plan for those that meet the eligibility requirements, such as having completed 10 years of service with the company and having worked in at least three countries and participated in local plans. The eligibility criterion depends on their definition of 'internationally mobile' employees. EDS defined an IME as an employee who works in at least two countries and participates in all local plans in those countries.

EDS considered one common pension plan approach referred to as an 'umbrella plan.' This plan sets an overall target benefit at retirement, e.g. 55% of earnings that the employee is guaranteed at retirement, offset by actual benefits received by other countries. It sounds good, but is hard to administer because the employee cannot determine what they are going to get from the plan until retirement. Estimates can be very cumbersome to calculate because information must be gathered from multiple plans and care must be taken to ensure that all benefits are estimated to begin at the same time or calculated with some sort of actuarial equivalency while making sure that all estimates use the same assumptions. The person calculating the estimate needs to study and understand each plan to determine the benefits and eligibility conditions to receive the benefit and to gather the earnings information needed from each country. It can be very time consuming to prepare an estimate in-house. If you hire a consultant to do the calculation, it can be expensive. Companies that have this type of plan complain of the administrative burden – so much so, that some have abandoned these plans. It is also difficult to estimate future liabilities of this type of plan.

Another approach to addressing shortfalls is the use a defined contribution (DC) plan. A DC plan can provide for an adequate retirement benefit, plan administration is straight forward, and is easy for the employee to understand. Mobility is not much of a problem because DC balances continue to earn interest through retirement or can be transferred to private interest-bearing accounts. There may be disadvantages for DC plans though in terms of tax issues; the deductibility of contributions and whether they are taxable to the employee when they are made and before the employee is vested. So, the employee may be paying taxes on a benefit they will never receive. An unfunded non-qualified plan could avoid these tax issues. An unfunded non-qualified plan would look similar to a cash balance defined benefit type plan with hypothetical account balances for participants.

EDS chose to use an unfunded defined contribution type program that provides a benefit that is supplemental to other EDS retirement benefits that may have accrued. The contribution rates are based on estimated shortfalls. It also provides for a past service credit as of the effective date of the plan. The company purposely chose not link this plan to any of the other EDS benefits to avoid administrative complexity.

The next question for EDS became which country they should as standard for which to calculate the shortfall. Many plans base the shortfall on the home country or the first work country. This works if the person eventually goes back to that country or if that is where they are planning to retire. At EDS, a person who started out in the UK (a high benefit country) and moved to Australia, would see a shortfall if you compare Australian benefits with UK benefits, but may not show a shortfall if they went to Italy. A person who starts in Australia and moves to Germany, where benefits are higher, may or may not have a shortfall, depending on how long they were working in each country and if they should then move to a third country, say Italy, would you then say there is no shortfall? It depends on all the countries they work in and how long they are there and if those countries recognize worldwide service and earnings. Because of these unknowns, EDS decided the best way to determine the possible shortfall was to base it on the IME's current work country. That means that at different points in time, the projected shortfall for a mobile employee would be measured by the average company 'target' and their current work country and therefore could fluctuate.

#### **International Supplement Retirement Plan Design**

EDS set their target retirement ratio to 55% of earnings at retirement. Therefore to determine the supplement needed to minimize the shortfall at retirement, the following equation was used:

EDS Plans + Government-sponsored Programs + X = 55%,

Where X = Supplemental benefit, if required.

The following chart shows an analysis of six of our countries' retirement benefit replacement ratios.

Income Replacement Ratio at Retirement							
-	Australia	Germany	France	Canada	UK	Italy	
Termination Indemnity	0%	0%	2%	0%	0%	15%	
Social Security	0%	40%	50%	10%	10%	55%	
Local EDS Plan	45%	11%	0%	43%	57%	0%	
Total	45%	51%	52%	53%	67%	70%	

Given these replacement ratios, EDS's consultants came up with the following annual contribution rates, to bring a full-career EDS employee up to approximately a 55% replacement ratio at retirement. Because the UK and Italy have replacement ratios of over 55%, there are no contributions while an employee is working in one of those countries.

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Age + Service	Australia	Germany	France	Canada	UK	Italy
Up to 39	1.0%	0.5%	0.5%	0.3%	0.0%	0.0%
40-49	1.5%	0.5%	0.5%	0.3%	0.0%	0.0%
50-59	2.0%	0.5%	0.5%	0.5%	0.0%	0.0%
60-69	2.0%	1.0%	0.5%	0.5%	0.0%	0.0%
70-79	2.5%	1.0%	1.0%	0.5%	0.0%	0.0%
80+	3.0%	1.0%	1.0%	0.5%	0.0%	0.0%

Annual allocations are made to a participant's account as of the end of the calendar year, based on the sum of their age and service, and the country they are working in. The percentages are applied to their earnings during that period. Interest is credited on their account balance at the end of the year. The interest rate used is equal to the 30-year United States Treasury bond yield rate as published in the *Wall Street Journal* on the first business day in September of each year. Earnings are converted to US\$ using the exchange rate found in the *Wall Street Journal* as of the last business day of the year. After 10 years of service with EDS, they are 100% vested in these contributions plus interest.

For eligible employees, a past service allocation was added for years of service prior to January 1, 1997, the plan's effective date. The past service allocation is equal to the annual allocation percentage (see schedule above) multiplied by their annual earnings for 1996. This is calculated for each eligible year of past service. Vesting of the past service allocation is based on service from January 1, 1997, and is shown in the following table:

Years of Service	Vesting		
<1	0%		
1 to <2	20%		
2 to <3	40%		
3 to <4	60%		
4 to <5	80%		
5+	100%		

A lump-sum payment of the vested account balance is made when the participant retires or terminates from EDS.

#### **Special Consideration for US Citizens**

EDS learned that there are special issues for U.S. citizens and residents working abroad. The Internal Revenue Code (IRC) requires U.S. taxpayers to base income on their income from all sources. The only type of funded deferred compensation plan (DB or DC) in which a U.S. tax payer may participate without adverse tax consequences is one that complies with the qualified rules of the Internal Revenue Service (IRS). Coverage under any funded plan, foreign or U.S. based that does not comply with U.S. law, can subject the taxpayer to tax on imputed income arising from contributions to or benefits accruing under the plan. The U.S. tax law does not distinguish between a non-qualified plan in the U.S. and a foreign plan that may be in full compliance with local pension laws.

Most companies do not include U.S. citizens or permanent residents of the U.S. in pension plans for IMEs for the tax reasons noted above. But what about an unfunded non-qualified plan? There are two requirements that must be met for an ERISA exemption (i.e., make it okay to have an unfunded non-qualified plan, not subject to reporting and filing requirements):

- 1. The plan is for a select group of highly paid executives (EDS could not meet this criteria based on the data received for our population) and
- 2. Such plan is maintained outside of the U.S. primarily for the benefit of the persons 'substantially all of whom are nonresident aliens' (Title I of ERISA, Section 4(b)(4)).

There are no regulations interpreting what it means to have a plan maintained outside of the U.S., but most legal opinion says that this refers to where the employee works, not where it's administered or where the records are kept.

The number of U.S. citizens allowed varies by legal opinions and can go as high as 25%. However, EDS was advised not let any U.S. citizens into the plan, because even if the plan starts out with no U.S. citizens, some of the participants will likely become U.S. citizens at some point and that number needs to be monitored.

One possible solution is to include U.S. citizens and residents in the U.S. qualified plan and provide umbrella coverage there, or cover them in a non-qualified plan, if the ERISA exemption requirements can be met. EDS chose to include them in the U.S. qualified DB plan. As long as they meet the eligibility requirements of working in at least two countries and participating in those countries local plans, they are covered in the "umbrella" provision of the U.S. plan. The U.S. plan was amended to recognize all EDS service and earnings in the calculation of a guaranteed benefit level. The U.S. plan was also amended to allow an offset of benefits paid from any other company plan (but never less than the actual pension earned in the plan while working in the U.S.).

#### Summary

EDS now has about 100 participants in the International Supplemental Retirement Plan, and continues to add more countries to the allocation grid, as people become eligible. There are about 30 "umbrella candidates" identified in the U.S. Retirement Plan so far, but this is still in the beginning stages of implementation. It is a manual process to locate these people and can be slow.

While there is no uniform solution, EDS feels that the approach of minimizing inequities rather than eliminating them has worked well. Overall, EDS is pleased with how things turned out. The design criteria of having a plan whose benefit aligns with the company's shortfall strategy (minimizing, not guaranteeing no shortfall), is easy to understand. It is easy to estimate retirement benefits and EDS' liability for participants in the International Supplemental Pension Plan. Administration, while requiring more manual effort than we would like, is not difficult. EDS is implementing a worldwide payroll system, which will make the identification, and tracking of these employees easier. Also planned, is moving more of the administration to the Internet, which will make gathering the data less cumbersome and easier for the employee to receive information on the plan.

The original goal was to minimize retirement shortfalls by maximizing current companyprovided retirement plans worldwide. To accomplish this goal, EDS has taken full advantage of the existing retirement plans by amending them where possible to recognize worldwide service and earnings in the calculation of benefits.

For IMEs, other than U.S. citizens and residents subject to U.S. federal income tax the International Supplemental Retirement Plan, an unfunded defined contribution type plan has worked to minimize shortfalls. The benefit from this plan is in addition to benefits payable from all other plans, to bring the total retirement replacement income close to the target replacement ratio of 55%.

For U.S. citizens and residents, EDS amended the U.S. Retirement Plan to recognize all EDS service and earnings for benefit accruals and to permit U.S. Retirement Plan benefits to be offset by other EDS retirement benefits in other countries. The administration of this provision is more difficult than the International Supplemental Retirement Plan, because benefit estimates involve collecting other benefit information from all countries in which the employee has worked. Estimating EDS' liability is also more difficult, but was determined to be overall the best solution available for this group.