Audit Committee, 26 November 2015

Internal audit report – Review of 5 year plan functionality and controls

Executive summary and recommendations

Introduction

Grant Thornton's internal audit report on the 5 year plan functionality and controls is attached.

Decision

The Committee is asked to review and discuss the report.

Resource implications

None

Financial implications

Grant Thornton's agreed fees in 2015-16 are £38,523 plus VAT.

Appendices

Internal audit report

Date of paper

18 November 2015

Health and Care Professions Council

Internal Audit 2015-16: Review of 5 Year Plan Model functionality and controls

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Distribution		**Timetable**	
For action	Andy Gillies Michael Tutt Roy Dunn Brian James Teresa Haskins	Fieldwork completed	12 November 2015
		Draft report issued	13 November 2015
For information		Final report issued	17 November 2015

Introduction

The Health and Care Professions Council (HCPC) is a regulator whose primary objective is "to safeguard the health and well-being of persons using or needing the services of registrants". To achieve this, HCPC maintain a register of health and care professionals who meet their standards for training, professional skills, behaviour and health. As of 31 March 2015, the HCPC regulated c.330,000 individuals, known as registrants, from the 16 professions they regulate, including speech therapists, paramedics and physiotherapists.

The diversity of the registrant groups serviced by HCPC has implications and leads to inherent challenges, such as how to effectively build financial projections of revenue and costs that appropriately accounts for the diversity of fee levels from different registrant groups, direct and variable associated costs. etc. To address this point around financial planning and budgetary processes, HCPC has developed and uses the 5 Year Plan Model[1] to forecast income, costs and associated cash flows.

The 5 Year Plan Model was developed using an external firm in line with the FAST financial modelling standard. As a result of applying the standard the model includes a large number of calculations to support forecasting of revenues across 16 professions. Since the model was developed HCPC is exploring the impact of changing from a six monthly direct debit option to a monthly, quarterly or bi-monthly direct debit, however the current model structure does not make this possible. As a result additional workings have been built to interface with original model calculations.

The 5 Year Plan Model is part of a wider modelling suite which includes within the spreadsheet:

- Registrant model[2]
- FTP Caseload Model[3]

In addition we have been provided with a copy of:

- (the pre-FAST in house Registrant Model[4])

As part of the Grant Thornton 2015/16 Internal Audit Plan, we agreed with the Audit Committee and management that we would undertake a review of the overall coherence of key planning model and potential risks in their use.

The modelling suite is used by several individuals within HCPC:

- 5 Year Plan Model - Andy Gillies / Michael Tutt
- Registrant model – Roy Dunn
- Salaries Model – Teresa Haskins
- FTP Caseload Model – Brian James

[1] The filename of the file supplied to us is "HCPC 5 Year Plan 2015-2020 updated September 2015 alt DD frequ modelling 21-10-15 compressed income sheet test"

[2] The worksheets making up the Registrant model are RegInp_A, RegInp_M, RegTime_M, RegWrk_A, RegWrk_M

[3] The worksheets making up the FTP model are FTPInp, FTPQuant, FTPCost

[4] Filename "BASIC MODEL NO Rf-20150720cQUADCBProjected registrant numbers - 2015-2021 - version with 4%and2%rmvl - Amended updated AG 3-9-15"

Scope of engagement

Following detailed scoping discussions for the audit, we jointly identified with management that the higher risk areas of forecasting relate to revenues, cash receipts and registrant numbers. The review therefore includes a limited scope assessment of the 5 Year Plan Model to consider the extent to which it is "fit for purpose" in respect of forecasting the income profile from monthly, quarterly and bimonthly Direct Debit arrangements for HCPC, in addition to the existing six monthly arrangements. While we have informed HCPC of any potential logical errors in the 5 Year Plan Model that we have found solely in the course of the agreed scope of our work, given the agreed scope of our work, our work should not be read as providing assurance the Model is completely error free.

Our agreed scope of review of model functionality and controls provides an opportunity to highlight the issues, concerns and challenges that may arise from the ongoing use of a financial model. These can be particularly useful where the requirements of a model have changed or if its results are no longer in line with expectations.

With any financial model they are designed as an approximation of reality as it is neither realistic nor desirable to construct a model that covers every potential detail and variable that may impact on future forecasts. Not least because the model would become very complex and likely require a large number of inputs to collate and input. In our experience useful financial models adopt simplifying assumptions to focus on the key cost and revenue drivers, however it is recommended to keep these under review to ensure they remain valid. This approach is the same as that used by the FAST standard, a financial modelling standard which we also use at Grant Thornton.

The objectives and areas to be reviewed are as follows:

Area to be review	Objective
Income calculations set out within the 5 Year Plan Model which covers 16 professions each on a separate worksheet with c300,000 cells of which 925 are unique formulae. The current model has 'hard-wired' calculation blocks to accommodate Credit Card or Direct Debit (6 monthly). To consider the impact of moving to monthly direct debit payment separate workings have been developed in the model and linked in (quly dd cash flows, bimthly dd cash flows, mthly dd cash flows)	Consider the extent to which derogations from FAST could be applied to reduce the size of calculations in a manner that maintains the integrity of the calculations and control checks. This will include considering the structure of calculations in one of the sample worksheets to see if it can be simplified through removal of duplicate coding within or across worksheets. Review the approach to modifying the direct debit payment terms within the model to consider the extent to which they are consistent with the approach to other model calculations and whether other approaches could be adopted which could reduce the risk of errors when using the spreadsheet. Propose a sample working, based on an example of one line item, that will set out an alternative structure for the calculation.
Registrant calculations within 5 Year Plan Model	Review the consistency between these workings and the calculations set out in the separate Registrant Model. Consider the flexibility to change assumptions for Registrant

Area to be review	Objective
	calculations
Fitness to Practice Costs within 5 Year Plan Model	Consider flexibility of model to allow for reforecasting 5 year plan based upon updated actuals – for example could there be an independent module to allow for changing activity inputs without necessarily changing forecasting (and if so how is version control managed) Assess the model's use as a Resource Management Tool, Workflow planning tool and costing model and consider through review / discussions whether different assumptions are required for these different purposes Review trends in FTP forecast costs to consider how these are explained by changes in inputs
Overall review of 5 Year Plan and framework for updating / modifying versions and the individual components.	To consider the risks around its update and modification, and the controls in place to mitigate these. High level of review of model interfaces to consider consistency with good practice. Consider availability / adequacy of user guide, model maps and trackers to manage model changes.

Grant Thornton approach

A preliminary briefing session was held on 13 October 2015 attended by Grant Thornton representatives and members of the HCPC management team including:

- Andy Gillies, Director of Finance
- Michael Tutt, Finance Business Partner

The context and scope of the review audit were discussed at this briefing session and the scope of engagement defined accordingly. To support the review, we have been provided copies of the Financial Model and supporting documentation as detailed in Appendix 1.

An interview schedule was proposed and agreed with the HCPC management team, to understand aspects of the modelling suite and to agree the scope of the engagement. The schedule of interviews conducted was as follows:

Name	Role	Date
Roy Dunn	Head of Business Process Improvement (Registrant Numbers Model)	13-Oct
Teresa Haskins	Director of Human Resources (Salaries Model)	13-Oct
Brian James	Head of Assurance and Development (FTP Caseload Model)	13-Oct

Further meetings with the HCPC management team were held during the period of our engagement to provide feedback on findings from our review.

Overall view of the HCPC 5 Year Plan Model functionality and controls

The value in external assurance not only lies in assessing the model and highlighting potential areas of risk, but in our opinion even more so in recommending mitigating actions and suggesting improvements that HCPC may wish to consider going forward to increase the functionality and ease of use of the model.

While this report identifies a number of issues and actions to improve the functionality of the model, the overarching view is that the individuals involved are generally comfortable with the model and how it operates. However there were a number of concerns identified in respect of the model size and the flexibility of the model to be adapted for different assumptions as the business changes – for example in forecasting Fitness to Purposes tests and alternative direct debit arrangements. We comment upon these within our report and note that models are at their most useful when they enable sensitivities to be run to test key assumptions. It is good practice for the base case results to be the subject of sense checks to ensure that the outputs are in line with expectations as this process can help identify where any errors have occurred in either model assumptions and/or calculations.

The team involved is clearly familiar with the detail of the model assumptions and broadly comfortable with the outputs. One area to consider is how the sense checks undertaken are documented both to support and audit trail of changes and to reduce the reliance on key individuals who have a working knowledge of the model.

We note that several structural changes have been implemented within the model in order to increase the functionality and at this stage they have not all been implemented in a manner which is consistent with the FAST standard. We recommend that this is addressed to ensure the model continues to comply with the FAST standard where practicable (e.g. row consistency), and that the rationale for derogations is documented (e.g. to reduce file size referencing inputs outside the "calculation block" where this does not adversely impact on the readability of the model) .

Interpreting the assessment categorisation

Rating	Summary	Description
Green	Areas of strength	General adherence to planning and modelling best practice
Amber	Suggested area of management focus	General adherence to planning and modelling best practice, but with areas of deviation. Potential issues identified within the model or planning process which may increase risk of errors or achieving objectives in the most efficient and appropriate manner. Focussed attention in stated areas is recommended otherwise, in our opinion, the robustness of the 5 Year Plan may be at risk if areas highlighted are not appropriately addressed.
Red	Requires immediate attention	An issue is identified which may have a significant impact on 5 year forecasts or where the robustness of the 5 Year Plan is at significant risk due to lack of, or inappropriate, control mechanisms. Management action required.

Green = areas of strength, Amber = suggested area of management focus, Red = requires immediate attention

	Grant Thornton Comment	Rating	Management Response
1	**Income calculations within 5 Year Plan Model**		
	• Our findings support the management assessment that the 5 Year Plan Model is relatively large (>40MB) and that a key contribution to this is the structure adopted by original developers of the model for the income calculations which involves significant repetition of calculation blocks when applying the FAST standard. An alternative method has been proposed by HCPC which involves some derogations to the FAST standard – where this is adopted we recommend the rationale is documented and further integrity checks are added. For example the total of DD payments accrued should be the same in 'IncWrk - AS - alt'!I475:I492 and 'IncWrk - AS - alt'!N520:EO520 – they are not because of an issue with the timeline but adding an error check on this would highlight and help maintain integrity where calculations use "ingredients" from a number of calculations blocks to reduce overall file size.		• We want to develop the 5 Year Plan Model in order to support decisions over possible income process changes, to better support in year resource planning in the Fitness to Practise Department, and to integrate with the budget setting and forecasting processes. The Model is already large and complex, so to enable further development, we intend to simplify the current Model where possible within the bounds of the FAST standard. Simplifications will focus on the income and cash calculations, which is where the greatest complexity and repetition lies. Any changes will be tested in order to ensure the Model still calculates the same results after the simplification. We agree that the rationale for the changes will be documented and that additional integrity checks will be built into the model.
	• In reviewing the calculation structures we note that there may be significant simplifications possible in some calculations which could reduce the model size and ease readability while maintaining compliance with FAST modelling standard. For example the calculation of the Initial Payment takes the total payments in each model phase and then reprofiles them in line with the new registrant profile, whereas the same result can be obtained for the AS group within significantly fewer lines of calculation by multiplying the number of new registrants by the relevant DD or CC payment for that period – see example in Appendix 2. Note that this result demonstrates that a blended rate can		• Noted. We also note the "blended rate error", which will result in a small misstatement of the timing of cash receipts, and we will aim to correct that in the revised calculations referred to above.

Grant Thornton Comment	Rating	Management Response
apply when the Initial Period covers a period where there is a step-up in charges leading to a potential overstatement of the revenue accrued. We understand this could be considered to not be material on the basis that this represents a very small proportion of total income for HCPC and there are already simplifying assumptions in place in respect of when individuals register and their entitlement to a free period.		
• We note that the issue identified for the Initial Period does not occur with Credit Card payments as the CC periods coincide with the any change in fees but that there can be a small one month difference in DD values (e.g. for IncWrk-AS DD10 starts in col BW for accrual and therefore includes one period at £76 and all other periods at £90 – as per row 562)		• Noted
• In order to assess the impact of alternative direct debit structures (e.g. moving to monthly, bi-monthly or quarterly payments) a number of amendments have been made to the calculation. From our limited testing we consider that the approach taken is reasonable but does not apply the FAST standard and modelling best practice in a number of respects which should be addressed (for example inconsistent formula across a row). When the calculations are finalised we would recommend re-running tests to ensure that when the model is in a steady state the cash flows and revenues behave as expected (e.g. flat).		.. • We note the non-compliance with the FAST standard in respect of the sensitivity modelling for monthly/quarterly/bi-monthly direct debits. We will aim to design a more integrated, FAST compliant approach to modelling cash receipts, allowing for variation of the direct debit frequency and also the proportion choosing to pay by direct debit at various points through the modelled period. The approach will be documented and tested and include integrity checks as recommended above.
• We would recommend that the model is subject to future testing, particularly where structural changes are made. For example such testing could involve running through test data scenarios. HCPC may also wish to consider undertaking a full model review when substantial changes are made.		• Agreed
• We have identified a number of issues		

	Grant Thornton Comment	Rating	Management Response
	within the calculations but these do not appears to have a material impact or only affect the latter years of the forecast and so the overall rating of amber is applied.		
2	**Registrant calculations within 5 Year Plan Model** Our comparison of the calculations contained within the 5 Year Plan and "Copy of Registrant numbers module of 5YP 14-09-15 RD FINAL", has highlighted a limited number of variances but these are not considered material. Our comparison of the outputs from the "BASIC MODEL NO Rf-20150720cQUADCBProjected registrant numbers – 2015 – 2021 – version with 4%and2%rmvl – amended upd" and the 5 Year Plan, has highlighted several variances:		• It should be noted that the Basic model, as its name implies is used for a sanity check only on the high level outputs from the FAST model.
	• For International Applications the Basic Model assumes the values from the last year of actuals are rolled forward. In the 5 Year Plan however a base set of values are used which are significantly smaller. The applications component does not appear to have further dependents in the model so it is not possible to quantify the impact of this inconsistency.		• Although this is a minor error in the FAST model, because it is only in the international applications, it does not have a material impact on the registrant numbers. The two models are different by 1,875 applicants. However this does not affect the projected international registrant numbers.
	• A different reduction methodology has been applied in the Basic Model and 5 Year Plan although the outputs are currently the same. The 5 Year plan uses a base set of values which are continuously multiplied by a decreasing percentage, while the Basic model multiples the previous year by a consistent percentage decrease. This has no impact where the assumptions are set to generate the same values.		• This is correct. The principle of the FAST model is to reduce the nesting of calculations. The outcome is the same, between the two models.
	• The Readmissions sheet within the basic model has an inconsistency such that the PHS value is not included within the total for one period. This drives a variance		• This is correct. The Basic model is under-calculating by 10 registrants. The Basic model is simply a sanity check for the FAST model we use to forecast PHS are

Grant Thornton Comment	Rating	Management Response
between the two models. • There appears to be some inconsistencies contained within the actuals for the first year of Actuals in the Readmissions sheet. • The 'rmoved registrants less readmis' sheet on the Basic model has some significant variances to the 5 Year Plan due the use of the '-' symbol removing the calculation value. As indicated in the 'Key Assumptions' sheet this symbolises that the route is not viable, although this logic does not appear to apply in the 5 Year Plan. The impacted output appears limited to the 'Removed less Readmission' graph. The flexibility to change modelling assumptions for Registrant Calculations within the 5 Year Plan Model is limited by several factors, including: • The mechanics of the model are such that for any migration from 'Actual' to 'Forecast', without an over-riding hard-coded number the last Actual value is rolled forward to the forecast. There is no ability to average/smooth the data or take account of the average from previous periods. • When removing Registrants the model does not distinguish between those who are newly joined which may have discounted fees and those who are retained with no such discounting. We understand this is accepted as a modelling simplification as most removals tend to occur within the group paying the full fee (e.g. at retirement from the profession). • The Readmissions are calculated in each period as a percentage of the opening balance rather than those who left in the previous period. This implicitly relies on a stable correlation between the number of leavers in the last period and readmissions. There is no check in place that any actual		unlikely to be regulated by HCPC in the near future, but this is yet to be confirmed • This is correct. The Basic model calculates readmissions differently to the FAST model. This inconsistency was identified with the Basic model when the FAST model was created. The FAST model is correct. • This is a deliberate facet of the model, allowing us to always base predictions on actual values. Change to projections can be made by varying percentages for future years, where we believe we have evidence of imminent change. • It is not possible to track discounted fee registrants vs. full fee paying registrants with the existing reporting software. Therefore as we cannot provide reliable inputs on these quantities we do not model the projected numbers. Intuitively, it is considered that longer standing registrants are much more likely to come off the register or fail to renew, than those newly on the register and paying discounted fees. • We will consider this as a possible amendment / improvement.

	Grant Thornton Comment	Rating	Management Response
	input (which would overwrite calculated values) for the number of readmissions is not higher than the number of leavers in previous period. While this may be possible due to the definitions of the terms, we suggest you may wish to consider adding an "alert" to highlight where this occurs so the model user does check this input is appropriate.		
3	**Fitness to Practice Costs within 5 Year Plan Model** • We did not identify any major issues with inserting new data to reforecast the 5 year plan based on updated actuals. We do however recommend inserting a model version tracker as a way of assessing performance against the budget and long term forecasts. We note that it is not currently possible to change the forecast dates for FtP costs independently to other calculations and understand this functionality may be helpful. One approach would be to insert a flag to limit changes to forecast and actual periods to only the FTP sections of the model. However when implementing this we would recommend that this is clearly reported to users so they are aware of assumptions being used • We have observed that the model can cannot currently be used for sensitivity analysis or as a resource /workflow planning tool. In the models current state the addition of monthly updates to enable resource planning and effective reforecasting would require a periodic freeze of the registrant assumptions. This would also drive the need for a reconciliation/ logic check between the frozen and updated registrant values. Implementing this would require an update of the model with sufficient testing to ensure a robust procedure for updating inputs and reconciling frozen values.		• Noted, though to reforecast, the start and end date of the budget actuals would need to change, which impacts on registrant numbers calculated elsewhere. This is not explicitly addressed in the detailed section on page 21 of this document. • Noted and agreed. We'd want to do this to assist with future budget planning and resource management, especially to monitor the impact of planned changes in FTP processes and structures.

	Grant Thornton Comment	Rating	Management Response
4	**Overall review of 5 Year Plan and framework for updating / modifying versions and the individual components.** Model Integrity Checks		
	We note there are limited checks within the model and those that are present focus on labelling rather than logic / consistency of inputs. We suggest a review of key validation checks (e.g. level of readmissions compared to leavers) are considered and added. This could also include general integrity checks such as ensuring that the balance sheet balances which we understand are undertaken outside the model at present.		• Agreed
	The model has 4 error flags which we understand arose from the structural changes to model and we recommend are reviewed and resolved.		• Agreed
	We also noted that: - in the version maintained checks sheet was hidden, we would recommend that this is maintained as a visible sheet. - the inputs for the registrants is duplicated for annual and monthly inputs, we would suggest that a single monthly input is used and these are summated to provide the annual format in which the model calculates to avoid the need to duplicate inputs. - the model appears to contain a large amount of redundant data. For example - there are several corkscrew calculation blocks[5] in the Fitness to Practice section which have no dependents or checks based upon them. There are also a large number of calculated values in the Registrant module which do not appear to contribute to the intended use of the model, such as the 'Applications' calculations ('RegInp_A'!N725:AB742) and 'Visiting professionals' which appears almost		• Agreed.

[5] A "corkscrew calculation block" is one which tracks a movement in balance – opening balance + additions – deductions = closing balance. The closing balance becomes the next periods opening balance and so if you use the Excel formula audit functionality to trace the dependents the arrows follow a corkscrew structure.

Grant Thornton Comment	Rating	Management Response
completely distinct. For example our understanding is that the scrutiny fees is driven by an input ('IncInp'!N210:Y221) rather than being driven from the applications inputs. Given the size of the model, we would suggest that the unrequired components and historic actuals are removed.		• Agreed
<u>User guides / model maps</u> We note there are no detailed user guides or maps for a complex model which presents risks on succession planning. We recommend that guides are developed as to how the various inputs are updated each year to ensure assumptions are reviewed and updated in a consistent manner. This is particularly important where models include a number of input sheets or where the inputs need to be updated in a specific way. For example it is important that any adjustment to renewal fees entered on the "Fee changes" worksheet coincide with the renewal dates entered on " 'RegInp_M'!I280:I297"		• Formalised change control with independent sign off is unlikely to be practical given the time investment needed to understand the Model and the small number of HCPC employees who use the Model
<u>Model trackers / change control</u> While a note of model changes has been prepared in a word document detailing changes made, we would recommend this is part of an overall change control process where the model amendments are subject to independent review prior to signoff. We note that there is no model tracker used to assist in version control so any input or structural changes can be monitored and changes amended – we would suggest including this which could track key KPIS between versions – 5 year revenue, costs, cash, registrant numbers etc.		• Agreed
<u>Staffing model</u> From our discussions we understand the salaries model sits with the HR team and is independent from the 5 Year Plan Model.		•

Grant Thornton Comment	Rating	Management Response
Although there is a major project underway to update the HR information system, at present there is both: (i) a separate spreadsheet recording salaries by HR which is used to flex salaries to assess impact of pay reviews (ii) HR database which does not have enough detail on salaries or abilities to flex. For planning purposes the separate spreadsheet is run independently from the 5 year budgeting of staff costs where these are based independently It is not unusual for detailed staffing to be managed separately given these typically contain confidential information, however we recommend having a reconciliation check between that spreadsheet and the 5 year plan to ensure forecasting and pay award decisions are being applied on a consistent basis.		

Detailed findings

The following pages present our findings and opinions compiled from the key stakeholder interviews and a desktop review of the models upon which our conclusions and recommendations are drawn. Because of the technical nature of the review, some of the findings are necessarily described in modelling terminology for them to be understandable and actionable by relevant teams in HCPC.

Review of income workings

Tests undertaken	Findings
Removal of forecast inflation and growth to assess a steady state position for HCPC (No Growth Model)	• Amending inflation and growth profiles resulted in flat income accruals in 2018/19 and 2019/20 as expected (see Appendix 3 for list of changes and results). During this period there is not a complete match between income accrued and cash received because for some items the timeline has not been sufficiently extended. For example in IncWrk – PH the CC5 payments only have 23 periods as the timeline ends March 2022. As a result the total in 'IncWrk - PH'!I2019 which is apportioned across 3 months Feb – Apr 2020 does not capture the full renewal period of 24

Tests undertaken	Findings
	months and so cash received is understated. • We have also noted an error within the flags where the model has been extended which may cause income in 2019/20 and beyond to be understated. This occurs where the renewal counter looks ahead for period beyond the 132 modelled periods. For example 'IncWrk - BS'!EA282:EO282 is referencing future periods beyond the model period so that the New Registrants fee accrued will drop out for this group after Nov 2020. This could be addressed by further extending the model to increase the timeline, however this would result in a larger model as a result of the additional calculation blocks introduced so an alternative would be to consider amended calculations. (See comments below on review of existing calculations) or applying an adjustment factor to the totals for each DD or CC phase to gross up where the number of periods is below 24. • From the work undertaken we consider that these could result in errors in forecasts for the years 2019/20 but the issues noted should not impact on earlier years in the forecast period
Review the approach to modifying the direct debit payment terms within the model to consider the extent to which they are consistent with the approach to other model calculations and whether other approaches could be adopted which could reduce the risk of errors when using the spreadsheet.	We have considered the model changes to implement the direct debit payment terms by reviewing the workings set out in the following worksheets and compared the impact on the cash received compared to the "No Growth Model" (see Appendix 3) on the basis the totals for the financial years 2018-20 should be unchanged with the only impact being a smoother income profile as a result of the move from semi-annual direct debit payments. The sheets considered were : o mthly dd cash flows o bimthl dd cash flows o quly dd cash flows • We noted some differences arising because the dd calculations do not appear to take into account the direct debit payments for international / grandparenting route but these are not a material component of the overall income so this omission is unlikely to have a material impact on the sensitivity analysis. • We note that although the modelling approach to building in these adjustments via the current working capital adjustment calculations is sound, the amendments as currently prepared to incorporate the DD calculations do not fully comply with the FAST methodology in the following respects: o Amendments made to the working capital calculations have been made from column BV rather than the start of the calculation block so there is no longer row consistency. This means that they

Tests undertaken	Findings
	may be inadvertently overwritten or not noticed by future users (see 'Working Cap'!BV71:EC88) o The formula used to link in working capital formula incorporates a number of nested IF statements and hardcoded values which are difficult to follow – e.g. "='IncWrk - AS'!BW$24+IF('control panel'!$B$69="m",'mthly dd cash flows'!BW71,IF('control panel'!$B$69="q",'quly dd cash flows'!BW71,IF('control panel'!$B$69="b-m",'bimthly dd cash flows'!BW71))) " o In order to achieve calculations for direct debit profiling on a bimonthly or quarterly basis the formula have been profiled manually – e.g. 'quly dd cash flows'!DF357:DH357 whereas we would recommend the use of flags or clear inputs. Under the current approach any changes to DD timings (e.g. as a result of registration dates) would have to be made manually o Identical row labels are used for different calculations which can make calculations difficult to follow and increase risk of error in updating the model – for example on the monthly DD calcs row 354, 375,396 and 417 are all labelled "Income received – AS" but refer to different values Full DD payments, Full CC payments, Discounted DD payments and discounted CC payments respectively. • If these coding adjustments are to remain we recommend they are made FAST compliant to assist future maintenance and update of the model.
Review of existing calculations for income on a sample basis	We note that for each profession each income working sheet has 169,255 formula cells of which 925 are unique. There is a significant duplication of workings and calculation blocks in order to allocate registrants into appropriate 6 months phases to calculate when the discounted fee and full fees apply. The approach to calculations in line with the FAST standard is to bring together all the "ingredients" of calculations together for each calculation. The model undertakes a number of calculation blocks to first allocate registrations to a phase, calculate the total for each phase and then to separately calculate the profile of direct debit and credit card payments from the phase calculations. Given the number of phases and the monthly timeline this has resulted in a large set of workings which can be difficult to follow. For example the total of DD payments accrued should be the same in 'IncWrk - AS - alt'!I475:I492 and 'IncWrk - AS - alt'!N520:EO520 – they are not because of an issue with the timeline but adding an error check on this would highlight and help maintain integrity where calculations use "ingredients" from a number of calculations blocks to reduce overall file size. We also note that the step up in DD payments can occur one month before an

Tests undertaken	Findings
	increase in rates - We note that the issue identified for the Initial Period does not occur with Credit Card payments as the CC periods coincide with the any change in fees but that there can be a small one month difference in DD values (e.g. for IncWrk-AS DD10 starts in col BW for accrual and therefore includes one period at £76 and all other periods at £90 – as per row 562) We suggest that HCPC may wish to consider an alternative structure to these calculations to reduce the number of calculations within each sheet and to ease review. We have proposed in Appendix 4 an alternative calculation which sets out an alternative approach which could be considered. Broadly this approach would be to model two pools for each profession – one for discounted fee (shown) which could then transfer to the full fee pool at specified renewal points. In order to provide integrity checks there should be reconciliation checks back to the registrants inputs and clear outputs so the flow of individuals through the fee pool can be easily reviewed and validated.

In relation to: Registrant calculations within 5 year plan model

Reference	Comment	Detail	Potential Impact
Comparison Calculations			
'RegInp_A'!T270:T287	The 5 Year Plan has replaced the hardcoded values in the Registrant module with formula.	The registrant module had hardcoded values in the cells detailed where it appears the calculations (as used in the 5 Year Plan Model) have been overwritten.	When updating the standalone Registrant module the overwritten values may be overlooked when updating the model or trying to identify differences between this and the 5 Year Plan Model for the same values.
'RegInp_M'!FD2:FY497; 'RegTime_M'!FN2:FY98; 'RegWrk_M'!FD2:GZ1669	The timeline for the 5 Year Plan has been extended until Mar 2022 – A further two years from the Registrant Module	The timeline and appropriate calculations have been extended until Mar 2022, this is present on the RegINP_M, RegTime_M and RegWrk_M.	The range covered by the Registrant Module is not a long as the 5 Year Plan module
'Visiting professional'!L6:L21	The Registrant Module has hard-coded values for year 0 for 'Visiting Professionals' . These values are not present in the 5 Year Plan.	The 5 Year Plan is missing hard-coded values that are present within the Registrant Module for Year 0 of the Visiting Professionals, driving a variance of 351 'professions' (this may refer to number of individuals, however the label used within the table is 'professions').	The value only appears to affect the page total and the page total has no dependencies.

Comparison of Calculations

'New professions - register trf'!E54; 'UK registrations '!E68; 'International applications' !E42; 'International registrations '!E67; 'Grandparents applications' !E42; …	Assumptions relating to the HMTCM are stated within the 5 Year Plan which are not evident in the Basic Model.	The following assumptions are explicitly stated in the 5 Year Plan but are not listed within the Basic Model: • 4,500 HMTCM practitioners transfering from voluntary registers (estimate) around 1st October 2015, with renewal 3 months later • HMTCM start part way through year 2 so only 50% of INTL predicted can apply or register. • HMTCM, initial research suggests we will receive 75 in first year of register (due to reg opening 1st Oct), 150 pa thereafter. • HMTCM grandparenting application route starts on 1 October 2015 and open for 24 months. We understand that HMTCM is no longer regulated and therefore no longer needs to be modelled. We would suggest that this stream is removed to reduce model size- provided historic data can be sufficiently adjusted.	No impact has been observed as it appears that the inputs are consistent and zero (for absolute inputs) in both models, however we suggest reviewing and updating related text. Or if these sheets are no longer used in 5 Year Plan model (they are currently hidden) they are deleted.
'International applications' !I6:I21	The Budget forecast in the Basic Model uses the last year of the actuals without any further calculation. Conversely the 5 Year Model uses an independently input set of values which are subject to calculation.	The calculations in the 5 Year plan draws upon inputs to use for the basis to start the forecast ('RegWrk_A'!U1387:U1404). The inputs which are used are not present in the Basic Model. Furthermore the inputs are subject to the percentage degradation in line with that of the remaining forecast (RegWrk_A) consistent in both models. The Basic Model utilises the last year of the actuals without any modification for the budget and year and then begins decreasing the balance	The two sets of the inputs and an additional calculation step in the 5 Year Plan result in a significant variance between the models. However 'applications' do not appear to drive anything else in the model as indicated by the results of the calculations having no dependents ('RegInp_A'!N725:AB742). It is not immediately apparent if this calculation is intended to drive any other model assumptions, and the absence of

		by percentage. There is a variance in calculation methodology which is evident throughout the models . The 5 Year Plan uses a base set of values for each year multiplies it by an ever decreasing percentage. In comparison the Basic Model modifies the previous year's value by a reducing percentage. I.e. the 5 Year plan has one set of data inputs which are applied over the year by a reducing multiplier, while the Basic Model uses a consistent multiplier and potentially numerous inputs.	dependants to the outputs suggests that this calculation block may be redundant. The two calculation methodologies could cause confusion if a set or single period of data are hardcoded into either model. The Basic Model would continue the forecast based upon the hardcoded figures while the 5 Year Plan would revert back to the reduced forecast.
'Readmissions'!C30:J30	The Basic Model has inconsistent totalling. As a result the PHS is not included in the Total until Year 2. There is also a variance of the hard-coded actuals and inconsistency with stated assumptions.	The inconsistent totalling calculation drives a variance of 5 between the two models as one period of PHS is not included in the Total. The hard-coded values in the first year of actuals is not consistent across both models, although the absolute variance is less than 4 ('Readmissions'!C6,C8). The related assumptions in both the 5 Year Plan and Basic Model do not appear to correlate with the percentage reductions which are implemented in the models. The models however are consistent.	Any PHS values before Year 2 will not be included in the Total the Basic Model. There is no such impact on the 5 Year Plan. The impact appears to be limited to the graphical outputs and Readmission registration sheets but the figures involved are not material.
'rmoved	Assumptions and symbol used	Within the assumption of the Basic Model – there is an	The absence of the non-viable assumption and its

registrants less readmis'!C11:D11,C18; 'rmoved registrants less readmis'!C21:F21	within the Basic Model but not consistent in the 5 Year Plan. Formula missing from Basic Model.	assumption that: '-' indicates route is not viable ('Key assumptions'!B6). This does not appear to be consistent within the 5 Year Plan. When calculating the removed registrants and readmissions three routes have been deemed not viable; consisting of the first two actuals of HAD and the first actual PYL. As a result of their non-viability in the Basic Model there is a variance of 1,048. The Basic Model is missing formula in the initial four Actual periods for SW. When the formula is replaced the first three provide a zero value, the fourth however drives a variance of 7,345.	application has caused a significant variance in the Actuals section of the models.(2012/13 and earlier). Given this does not impact on the forecasts it is not considered a material issue for this review.

In relation to: Fitness to Practice Costs within 5 year plan model

Reference	Comment	Detail	Potential Impact
	We tested to see if the model works as expected by overwriting all of the inputs on the "FTPInp" worksheet over all periods and assessing how this affects the financial statements presented in the "Financial Overview" worksheet.	• Most inputs within the Fitness to Practice worksheets in the 5 Year Plan Model appears to drive "Total Costs Excluding Payroll" in the Income Statement, "Cash and equivalent" and "Reserves" in the Balance Sheet and "Costs excluding payroll paid" in the Cash Flow Statement within FY17 to FY20 (the 'long-term forecast' years), as defined in the timing input worksheet. This is expected given these costs do not directly drive revenue. • A number of inputs do not alter the financial statements in these periods as they relate exclusively to either the 'budget' period or the	• We did not note any material issues with inserting new data to reforecast the 5 year plan based on updated actuals using the existing logic.

Reference	Comment	Detail	Potential Impact
		actuals 'periods' where input values are used instead of forecasts.	
'FTPInp'! row 583		• We note that row 583 of the "FTPInp" worksheet feeds into a row which is hidden.	• Hidden columns/rows can be overlooked when editing the model or updating inputs. We understand that this risk is mitigated as these do not feed into other cell but if redundant then we would recommend deleting
		• A change to the budget actuals and forecast date on the "SetInp" worksheet would drive a change on the number of registrants in other parts of the model and therefore multiple other lines in the financial statements including revenue. • We note that the model overwrites values when inputs are changed rather than creating another iteration of the data.	• If the functionality would be useful, we would recommend inserting the ability to change the forecast and budget actual period in only the FTP sections of the model. This can be implemented through the use of a new flag to control this. However if adopted we suggest that there is a clear reporting to users of the base date being used • There is therefore no way to assess performance using this section of the model (eg if management would like to assess the budget forecast with up to date actuals). This can be controlled via a model version and tracker.
	We reviewed the trends in the FTP forecast costs to assess	• The costs groups titled "Total venue costs", "Fare & subsistence", "Total catering cost",	• We note that period 61 is the first period in the long term forecast. A change in trend

Reference	Comment	Detail	Potential Impact
	how these are driven by the inputs	"Transcription costs", "Total other non-panel costs", "Total panel fees", "Total expenses", "Total witness cost" all follow a similar profile whereby they decrease over a number of periods to a minimum in period 61 before increasing again until period 70 where they flatten. This appears to be due to drop in hearing days in early part of long term forecast as a consequence of recent actuals given panel fees represent a significant proportion (c.40% of FTP costs[6]). This is driven from low number of cases observed in the early part of 2015 ('FTPQuant'!BG168:BI168). • We note that there is some volatility in the Total other non-panel costs". This is driven by fluctuations in the IC bundles cost which itself is driven by the "% of H&C decs against the register" input. • "Registration appeal fee" and "Registration appeal expenses" are fixed amounts for a year and only increase annually at the beginning of the following year. These are driven by the Legal Assessor, Panel Chair and Panel members inputs for the appeal fee and a range of inputs	therefore may suggest a that the inputs in the long term forecasts may be out of phase with the inputs in the budget forecast period. • We note that if this is part of a strategy to clear a backlog of cases which were less likely to make it to full hearing then this may not necessarily reflect an overall reduction in future case costs. At present the assumptions regarding [cases concluded] is flat and it may be appropriate to update this. Through discussions we understand that it would be helpful for HCPC to have the ability to vary forecasts for these costs based upon the actual numbers in each phase of the process in the same way that it is possible to overwrite actuals for the number of registered professionals. We would recommend this is explored further by HCPC to improve the flexibility and effectiveness of the tool.

[6] Calculated by dividing "Total panel fees" by all FTP costs summarised in 'FTPCost'! rows 9 to 29

Reference	Comment	Detail	Potential Impact
		for the appear expenses.	
'FTPQuant'! row 132	Other observations	• This model utilises the number of caseworkers required as a fixed input to calculate cost, therefore assuming a fixed level of activity over this period.	• This model can therefore currently be only used as a forecast of costs rather than as a resource planning tool or a workflow planning tool. Functionality could be added to the model using a target workload and the existing data in the worksheets. Alternatively, sensitivities could be run on the impact of recruiting more staff and the impact this would have on the balances of cases.
'FTPQuant'! rows 120 – 127, 374 – 380, 575 – 581 and 601-607		• Row 132 in the "FTPQuant" worksheet has a line item but no contents within the cells. This risk is mitigated as these cells do not feed into any calculation or output.	• Consider removing the redundant row. • Noted and agreed
		• A number of inputs flow into a corkscrew which do not lead into anything. An example is the on-going POT cases balance.	• It is therefore possible that there maybe be a build-up of cases or appeals which would go unnoticed unless it was manually monitored. One potential solution to this could be entering a check to test whether the balance falls below zero or hits a threshold. For example, if the number of on-going POT cases hit 100 then this should generate a message on a check page informing a user that action is required for

Reference	Comment	Detail	Potential Impact
			that period. • Noted and agreed

Overall review of 5 Year Plan and framework for updating / modifying versions and the individual components.

While undertaking our review on the modelling suite we have also considered the following:

- the existence of any model maps or user guides that are available to assist users and to reduce the reliance up on key individuals who understand the model
- the existence of any trackers to manage version control and the overall input structure
- the extent to which the models are reliant upon inputs from external sources and if so what checks are applied and what model references are retained

Model Integrity Checks

Data management checks			
Active lines data transferred to 'Forecast' check	-	OK	check
L1 Ref label sync check with L1	-	Error	check = Missing label or out of Sync
L1 Change label sync check with L1	-	Error	check = Missing label or out of Sync
L1_Budget label sync check with L1	-	Error	check = Missing label or out of Sync
Budget_Extract label sync check with L1	-	Error	check = Missing label or out of Sync
Check - Reg model			
Modelling period check	-	OK	check
Modelling period check - Time_Reg - M	-	OK	check
Modelling period check - Time_Reg - Ann	-	OK	check

Screenshot from 5 Year Plan Model – checks sheet

The model has 4 error flags which we understand arose from the structural changes to model and we recommend are reviewed and resolved. We also note the sheet was hidden and therefore not immediately available to users

We note there are limited checks within the model and those that are present focus on labelling rather than logic / consistency of inputs. We suggest a review of key validation checks are considered and added, this could include:

- Checks on calculation integrity- e.g. balance sheet balancing, cash flow = movement in cash balance
- Checks on reallocation of values to registrant groups – e..g 'IncWrk - AS'!I955:I976 DD total should equal DD total in row 'IncWrk - AS'!N936:EO953 excluding IP phase
- Alerts / checks on inputs – e.g. Registrant balances not being negative (e.g. through entering of actuals). The timing of any step up in fees coinciding with the registration period / CC payment period.

We understand that there are no user guides or model maps available. We recommend that guides are developed as to how the various inputs are updated each year to ensure assumptions are reviewed and updated in a consistent manner. This is particularly important where models include a number of input sheets or where the inputs need to be updated in a specific way. For example it is important that any adjustment to renewal fees entered on the "Fee changes" worksheet coincide with the renewal dates entered on " 'RegInp_M'!I280:I297"

Existence of trackers and overall input structure

We understand that there are no formal model trackers and note there is no standard convention for filenames. For example we have been supplied with versions labelled:

- **HCPC 5 Year Plan 2015-2020 updated September 2015 alt DD frequ modelling 21-10-15 compressed income sheet test.xlsb**
- **HCPC 5 Year Plan 2015-2020 updated September 2015 alt DD frequ modelling.xlsb**

These filenames are quite long and it is not always clear which version came first. We suggest consider using a standard format – e.g. HCPC 5 Year Plan 2015-20 v00a – where versions can then be updated v00b or v01a where a major change. This suffix can then be used to identify specific versions – e.g. the version used to generate a particular report.

We also recommend using a tracker sheet within the model so that changes in versions can be monitored and any changes in key outputs traced back to the version of the model that led to the difference. Such a tracker can be set up to request individuals to enter a reason for the model update (e.g. updated inputs from XX) and can include key outputs / KPIs such as cash balance in year 5 or total revenues over 5 years as well as information such as date saved.

While a note of model changes has been prepared in a word document detailing changes made, we would recommend this is part of an overall change control process where the model amendments are subject to independent review prior to signoff. The updates to the model have been documented in a word document but not signed off.

In terms of the overall input structure this is generally well structured with clear separation of inputs, workings and outputs. We note that the inputs for the registrants is duplicated for annual and monthly inputs, we would suggest that a single monthly input is used and these are summated to provide the annual format in which the model calculates to avoid the need to duplicate inputs.

We note that the model appears to contain a large amount of redundant data. For example - there are several corkscrew calculation blocks in the Fitness to Practice section which have no dependents or checks based upon them. There are also a large number of calculated values in the Registrant module which do not appear to contribute to the intended use of the model, such as the 'Applications' calculations and 'Visiting professionals' which appears almost completely distinct. Given the size of the model, we would suggest that the unrequired components and historic actuals are removed.

The extent to which the models are reliant upon inputs from external sources and if so what checks are applied and what model references are retained

We did not identify any external references in the 5 Year Plan Model which is consistent with the approach for it being an integrated model to minimise the risk of errors being introduced through inputs being inconsistently updated.

We understand that a separate Registrant module is maintained and then reconciled at key points, we consider this is a useful check on the integrity of the 5 year plan model and recommend that this check is formally documented. For example this could be done by keeping a note of which file versions were checked at a point in time.

Conclusion

Overall the model is considered in material respects to be fit for purpose in respect of the overall current way of planning and modelling through separate but integrated models. In reaching this conclusion we have considered the extent to which the registrant numbers, fitness to practice, income and five year financial model are coherent, appropriate and consistent with best practice.

Within our report we have identified a number of issues for further investigation and action by the management which would address some potential concerns in respect of forecast revenue towards the end of the five year period. Throughout our discussions the size and complexity of the model calculations have been raised as an issue, and this complexity has been borne out of the approach . The models have been developed in accordance with the FAST modelling standard which aims to ensure models are flexible, appropriate, structured and transparent. This standard emphasises the need for simple formula and a clear calculation block structure and for some calculations, notably revenue, although the formula are not complex, the number of steps used to calculate revenue have resulted in a structure that is difficult to easily navigate. We note that HCPC has proposed some alternative structures to simplify the calculations which we consider reasonable, and the deviation from FAST (referencing inputs outside the calculation block) could be considered reasonable to simplify the model and ease use. We have also suggested some alternative approaches that could be considered to simplify the calculations.

The model and process for updating inputs between the separate integrated models appears to be well understood by the individuals involved. While discussions have identified a number of checks that are undertaken, we note there is no formal documentation of these checks and that the model has a limited number of internal error checks which do not cover financial checks such as the balance sheet checking. We would recommend that the internal error checks are reviewed and expanded to assist in the review process and also provide a series of self documented checks. We also note there is not a detailed user guide or note of the steps taken to update the models which means that the process is reliant upon being carried out by experienced users.

To the extent the models are updated there is no use of a standard tracker or filenaming convention so that specific outputs or checks can be easily referenced back to the source model.

While we have informed you of any potential logical errors in the 5 Year Plan Model that we have found solely in the course of the agreed scope of our work, given the limited nature of the assessment we are not able to provide you with assurance the Model is free from error.

Acknowledgement

We would like to thank those HCPC staff who assisted us during the course of the review.

Grant Thornton LLP
November 2015

Appendix 1 – Document Reviews

The Project team provided Grant Thornton with a selection of the current, most relevant documents related to project governance, delivery planning, budget and solution.

Summary of document review
• **HCPC 5 Year Plan 2015-2020 updated September 2015 alt DD frequ modelling 21-10-15 compressed income sheet test.xlsb**
• **HCPC 5 Year Plan 2015-2020 updated September 2015 alt DD frequ modelling.xlsb**
• **Registrant numbers module of 5YP 14-09-15 RD FINAL.pdf**
• **BASIC MODEL NO Rf-20150720cQUADCBProjected registrant numbers - 2015-2021 - version with 4%and2%rmvl - Amended updated AG 3-9-15.xlsx**
• **BASIC MODEL NO Rf-20150720cQUADCBProjected registrant numbers.xlsx**
• **Registrant numbers module of 5YP 14-09-15 RD FINAL.xlsx**

Appendix 2 – Alternative Initial payment calc

The extract below shows an alternative working for the Initial Payment for the credit card which derives the same values but shows a blended rate is being assumed for the Initial Fee

Blended rate £83 for the 2 year fee payment rather than payment being based upon the £76 prevailing at time, implying the Initial Payment is overstated

CREDIT CARD WORKINGS (two year)																
Registration fee discount - UK route	50.00%	%														
Phase counter - AS	-	counter	-	-	-	10.0	10.0	11.0	11.0	11.0	11.0	11.0	11.0	12.0	12.0	12.0
Annual renewal fee accrued - AS	High Case 1	GBP	-	-	-	76	76	76	76	76	76	76	76	76	76	76
Initial Fee to be paid - AS - UK route year 1		£ / person				38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	45.00	45.00	45.00
Initial Fee to be paid - AS - UK route year 2		£ / person				45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
Initial Fee to be paid - AS - UK route total		£ / person				83.00	83.00	83.00	83.00	83.00	83.00	83.00	83.00	90.00	90.00	90.00
%age of new registrants paying by CC	20.00%	%														
New registrants - UK route - AS	-	#	-	2,599	-	17	11	14	21	55	43	47	39	21	16	16
New registrants - UK route - AS CC						3	3	3	4	11	9	9	8	4	3	3
Initial Fee to be paid - AS - UK route total	-	£ / person	-	-	-	83	83	83	83	83	83	83	83	90	90	90
New registrants - UK route - AS CC	-	-	-	-	-	3	3	3	4	11	9	9	8	4	3	3
Forecast + post forecast flag	-	flag	-	72	-	1	1	1	1	1	1	1	1	1	1	1
Initial Fee - AS UK CC		£	5,335	5,458		290	230	234	347	908	714	781	651	380	282	282
EXISTING CALCS																
Initial payment - AS - UK route - CC	-	GBP	5,335	5,458	-	290	230	234	347	908	714	781	651	380	282	282
Difference																
Initial payment - AS - UK route - CC		-	-	-		-	-	-	-	-	-	-	-	-	-	-

Appendix 3 – Check on model with growth removed

In order to check that the revenue accruals and cash received calculations were consistent we removed the inputs for forecast periods in Reg_InpA and amended Fee Changes so flat £76 in all periods to have a flat profile in 2018/19 and 2019/20 (the No Growth Model):

The results for the CH Group are shown below where colour coding shows how the totals agree and it can be seen that the totals for 2019 and 2020 agree

Model period ending	4	*Errors*				30-Apr-18	31-May-18	30-Jun-18	31-Jul-18	31-Aug-18	30-Sep-18	31-Oct-18	30-Nov-18
Model timeline label	-	*No Alerts*				Budget Fcast	Budget Fcast	Budget Fcast	Budget Fcast	Budget Fcast	Budget Fcast	Budget Fcast	Budget Fcast
Financial year ending	*Output*	*Changes*	2019	2020		2019	2019	2019	2019	2019	2019	2019	2019
Model column counter	**Constant**	**Unit**	**Total 1**	**Total 2**		85	86	87	88	89	90	91	92
SUMMARY - CH													
Fees received													
Scrutiny fee - CH - UK route	-	GBP	-	-	#	-	-	-	-	-	-	-	-
Scrutiny fee - CH - Inter / grand	-	GBP	7,980	7,980	#	317	581	423	846	951	740	687	846
Scrutiny fee - CH - grandparenting	-	GBP	-	-	#	-	-	-	-	-	-	-	-
Initial payment - CH - UK route - DD	-	GBP	-	-	#	-	-	-	-	-	-	-	-
Initial payment - CH - UK route - CC	-	GBP	-	-	#	-	-	-	-	-	-	-	-
Initial payment - CH - Inter / grand - DD	-	GBP	-	-	#	-	-	-	-	-	-	-	-
Initial payment - CH - Inter / grand - CC	-	GBP	-	-	#	-	-	-	-	-	-	-	-
Direct debit payments - New Registrants - UK route - CH	-	GBP	81,898	81,898	#	-	40,949	-	-	-	-	-	40,949
Credit card payments - New Registrants - UK route - CH	-	GBP	40,949	-	#	-	13,650	13,650	13,650	-	-	-	-
Direct debit payments - New Registrants - Inter / grand - CH	-	GBP	4,074	4,074	#	-	2,037	-	-	-	-	-	2,037
Credit card payments - New Registrants - Inter / grand - CH	-	GBP	2,037	-	#	-	679	679	679	-	-	-	-
Direct debit payments - Existing Registrants - CH	-	GBP	689,472	689,472	#	-	344,736	-	-	-	-	-	344,736
Credit card payments - Existing Registrants - CH	-	GBP	344,736	-	#	-	114,912	114,912	114,912	-	-	-	-
Readmisson fee accrued and received - CH	-	GBP	-	-	#	-	-	-	-	-	-	-	-
Income received - CH		GBP	1,171,145	783,423		317	517,543	129,663	130,086	951	740	687	388,567
Fees accrued													
Scrutiny fee - CH - UK route	-	GBP	-	-	#	-	-	-	-	-	-	-	-
Scrutiny fee - CH - Inter / grand	-	GBP	7,980	7,980	#	317	581	423	846	951	740	687	846
Scrutiny fee - CH - grandparenting	-	GBP	-	-	#	-	-	-	-	-	-	-	-
New registrants fee accrued - CH - UK route - DD	-	GBP	81,898	81,898	#	6,825	6,825	6,825	6,825	6,825	6,825	6,825	6,825
New registrants fee accrued - CH - UK route - CC	-	GBP	20,474	20,474	#	1,706	1,706	1,706	1,706	1,706	1,706	1,706	1,706
New registrants fee accrued - CH - Inter \ grand - DD	-	GBP	4,074	4,074	#	339	339	339	339	339	339	339	339
New registrants fee accrued - CH - Inter \ grand - CC	-	GBP	1,018	1,018	#	85	85	85	85	85	85	85	85
Registration fee accrued - registrants excl new registrants - D	-	GBP	689,472	689,472	#	57,456	57,456	57,456	57,456	57,456	57,456	57,456	57,456
Registration fee accrued - registrants excl new registrants - C	-	GBP	172,368	172,368	#	14,364	14,364	14,364	14,364	14,364	14,364	14,364	14,364
Readmisson fee accrued and received - CH	-	GBP	-	-	#	-	-	-	-	-	-	-	-
Income accrued - CH		GBP	977,284	977,284		81,092	81,357	81,198	81,621	81,727	81,515	81,462	81,621

Note that in the above extract the CC lines continue for 24 months for the totals to agree but this is not shown for reasons of space

Appendix 4 – Alternative workings for DD

We note that the approach to modelling a series of registrant phases results in a large number of calculation blocks and have for discussion purposes attached an alternative approach that HCPC may wish to consider which focusses on the use of a pool of individuals within initial payments phase who would then transfer to the full payment.

SEE FILE - Draft illustration of alternative approach for discussion for DD.xls

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