目标：有一个可以交出去的初形

做好这些工作需要具备的关键的能力有哪些

投资银行内审的位置

周日目标：准备好每一条写的是什么，以及面试内容

**A199058: Structured products WPB HBCN – New Product Approval and Remote Advised Sales Journey**

*M: Customer Education Not Always performed for Customers without knowledge and Experience Prior to Sales*

The WPB sales team has not implemented adequate controls to confirm the effectiveness of customer education by sales staff, when customers declare they have no knowledge and experience of structured products prior to sales.

Instead of providing customers the necessary product education, sales staff advised customers to re-visit their K&E. Customers later changed their answers on knowledge of structured products from “no” to “yes”.

**A198962: Wealth Management Investment Products Sales, WPB HBCN**

*M: Insufficient Customer Eligibility Checks for Private Fund(PF) Sales against Investors Existing Investment Profile*

WPB China Customer Value Management(CVM) team does not consistently verify customer eligibility for PF product sales. As a result, PF sales to potentially ineligible customers may not be detected.

MAP: system enhancement – enhance system controls for SFP(strategic financial planning) to auto-check the qualified investor proofs.

**A173530: Processes and controls audit of HSBC wealth and personal banking, wealth product management, sales and operations – Hong Kong**

M: Deficiencies in application of Global incentive framework(GIF)

Retail distribution does not always determine RMs’ performance ratings and calculate incentives in line with the GIF. Further, the documented rationale does not always justify incentives that exceed incentive pay parameters and performance ratings.

Specifically:

* 26 of 30(87%) sampled incentive payments didn’t have sufficient rationale for exceeding GIF payment parameters.
* Data analysis indicates 1518 of 4078(37%) staff incentives exceeded the pay parameters
* 18% RMs rated Top/Strong for their “Customer” KPI, had unperformed 3 out of 5 underlying KPIs. 37% RM rated as Good or Inconsistent achieving at least four of the five KPIs

Security dealing licenses

CPWP: 香港注册私人财富管理师

SLA: service level agreement

* Fuzzy matching analysis for loan company

Payment: payment sanction scanning(WOLF) comments, characters; L1&L2 comment the same

Comments with referenct to open source, white list, linkedin&facebook should not be used as data points

Credit card

Account

IRIS - Review key phases and tests in Regulatory Compliance Risk Assurance(RCRA) which is a second line of defense function and undertakes risk based on testing of the RC risk and control activities;

Review status

MAP example RCRA

自我介绍

面试官好，我是Jessica，再过去的5年时间里一直从事数据分析工作，很高兴今天来到贵司参加面试。

1. 知识储备，毕业的院校，学习的专业，证书资质，积累的知识，做过的项目，
2. 工作正相关
3. 正面突出自己的业绩，
4. 软实力，共同协调能力，团队协作能力

有例子做辅助

我先说一下我的教育和工作背景，我本科毕业于中央财经大学数理金融专业，然后在美国罗格斯大学读金融统计与风险管理，毕业后在普林斯顿一家marketing consulting（市场调研）公司做data analyst。工作三年之后回国加入汇丰，我现在在汇丰内部审计组做DA。在国内的时候读书期间有通过一些证券资格考试的科目，在美国考CFA，目前通过CFA3级和FRM1级。

第二点我看到这个职位是modeling，那我说一下做过的模型的经历，从本科开始有学习计量经济学的模型，研究生期间基本每个课程都有case study和projects，有探索过评分卡模型和各种数据挖掘模型线性非线性的模型比较。毕业之后的第一份工作中做过市场分割项目，帮客户去细分目标市场，主要是针对研究的特定市场的医生进行聚类和分类的研究，我们主要根据医生的资历，用药习惯，对新药的接受度分类领导型，拥护变革和传统保守型，我们客户根据我们分类的结果针对性的派销售代表。分析工具主要是excel和SPSS，SAS

来到汇丰之后我更多接触到的是银行内部的数据，接触数据的类型取决于审计项目的需要，比如wealth management（财富管理）的项目，我就去看关于理财产品，基金，保险的交易记录，用户填写的RPQ（风险评估问卷），销售人员的incentive（业绩激励）数据。更多的是去帮助审计sampling（抽样）和筛选exception（异常数据），同时用Qlik Sense提供overview和KPI dashboard。使用的工具主要是Python，QS

第三点说一下

我在工作中很注重交流，我的工作经常要跟别的部门合作沟通，比如了解清楚审计人员真正需要什么分析，要跟IT沟通我们拿的数据和业务的对应，这些清楚地沟通让我能有效率地去做分析。有的项目可能需要我跟另一个DA一起去support，我们能合作的很好，大部分项目需要一个DA去做就可以，那我也能自己完成。

这些差不多就是我的一个介绍。

第二点说一下做数据分析的经历，研究生期间基本每个课程都有case study（案例研究）和projects（课程项目），使用R去做数据处理和回归分析，有探索过评分卡模型和各种数据挖掘模型线性非线性的模型比较。毕业之后的第一份工作是市场调研的分析，包括计算市场份额，数据清洗和数据合并，也做过市场分割项目，帮客户去细分目标市场，主要是针对研究的特定市场的医生进行聚类和分类的分析，（我们主要根据医生的资历，用药习惯，对新药的接受度分类领导型，拥护变革和传统保守型，我们客户根据我们分类的结果针对性的派销售代表。）

I’m Jessica. I have been working in data analytics for over 5 years. It’s my honor to have this interview./meet you.

First let me introduce my education and working background. I graduated from Central university of Finance and Economics for undergraduate in Beijing. During the school time in China, I worked as an intern in both securities company and consulting firm. Then I went to US and earned master degree in Financial Statistics and Risk Management of Rutgers University. I joined a market consulting firm in US and worked in DA team for 3 years. After that, I went back to China and joined HSBC as assistant analytics audit manager in internal audit team since 2019. I passed several qualification examinations for securities practitioners. Also, I passed CFA level 3 and FRM level 1.

Secondly, I saw this position is related to modeling. So I’d like to tell my experience of modeling. Starting with graduate study, we have case studies and projects for each course. I’ve explored application scorecard study and data mining in credit data. In my first job, we research on physicians data, like their experiences, education, attitude to new products to divide them into 3 classes: leader, progressive, traditionalist. We use methods of clustering and classification. This helps our client send sales representatives to targeted physicians.

After joining HSBC, I’m exposed to more financial data. It depends the audit projects I support. For example, if I support a wealth management audit, I’ll extract transactions of related products, unit trust, insurance, structured products, customers’ RPQ and RM’s incentives data. To provide overview of the market and extract exception and help sampling.

Secondly, I’d like to talk more about my working experience of my current position.

Since I’m involved on different audit projects. I have exposure to a variety of business lines. I worked on Wealth management audit for HBCN, HK, HASE. Basically, we analyze wealth transactions and customers data to check the sales suitability and identify suspicious transactions

**sales suitability:** test customers are not buying higher risk product than their risk profile level. We review customers’ profile, source of wealth, average assets and affordability rate. Preferred investments period and needs to see if sales are reasonable.

**suspicious transactions:** check if RM promote products to customers for higher commission, (保险)

if there are unreasonable answers of product knowledge and experience to bypass system limitation.

I’ve also supported Account data for AML audit, it covers both WPB and CMB customers. We filter out incomplete or invalid data.

**WPB focus on ID&V**: perform test to facilitate review for active customers/NTB in audit scope, (providing customers list with ID in blacklist record, or) if customers have incomplete records, like invalid phone, email, unknown address.; , check customers with id expired, transactions with id expired

CMB: check information related to customers’ connected party data collection.

These audits give me chances to learn regulations.

check if there’s split transactions into smaller size to avoid submitting relative supporting documents

Thirdly, I‘d like to talk about my personality. I’m a detail-oriented person. I deal with variables, data structures all the time. I was trained to focus on details about any analysis. Also, my personality is friendly. (I don’t involve too much emotion into work. ) Most of the projects involve working with other teams. I need to be clear what kind of analyses/policy auditors need. I communicated a lot with IT to make sure I understand datasets correctly. If the projects need two DA support, I work well with another one. Most of the time, it only needs one and I’m able to support from beginning to the end.

Due to my background, experience, I’m confident I’ll be able to succeed in this role you are hiring for.

That’s pretty much about myself

关于加班怎么看

1. 表明自己对工作认真负责，效率高，抗压能力好

我会在工作时间之内高效的完成自己的工作，可能用一些工具和沟通方式去提高自己的工作效率，尽量不把应该在工作时间内完成的工作拖到下班之后去完成

公司会有临时的紧急任务和一些非常重要的项目，在这种情况下，我非常愿意以公司的目标和任务为重，在一定程度上和需要的时候，我是可以接受加班的。

First I make sure I work efficiently during the working hours. And try to use tools and communication skills to improve efficiency. I don’t want to work late because I’m not working hard enough in working hours. I understand I need to spend more time on this work since I’m a new joiner. There may be some urgent tasks and important ddl needed to be fulfilled. I’m willing to put the work as a high priority and work late.

1. 用简单事例证明

曾经我在xx工作的时候，客户需要一个紧急的方案，调研组在临下班的时候跟我们去沟通，这个项目非常紧急，因此当天临下班我就跟其他部门去协调

现在我们有很多项目是跟英国那边合作和讨论，因为时差的关系，我们下午5点才有机会和他们开始会议，所以必可避免要延迟下班时间

In my current position, I working with colleagues in UK on a lot of projects, Usually there’s not enough overlap working time. It’s hard to find a slot in calendar for all of members. I have to work late to have meeting and that’s totally acceptable.

1. 说清能够接受的边界

当然我注重家庭和工作的平衡，如果能在工作时间完成的工作或者临时紧急加班我可以接受，如果是长期的996对我来说比较勉强

I value work and life balance and I like culture in hsbc. I accept working late to provide urgent work and necessary meetings. But if it needs me to work from 9am to 9pm for 6 days a week. That’s a little hard to take.

1. 探听对方加班强度

顺便问一下贵公司的加班强度是什么样的，我也希望HR能如实告诉我，这样的话我们彼此都了解一下情况，会更负责人一点

By the way, what’s the working hours for this position usually?

想要换工作的原因

我现在position的定位是embedded DA，我的工作一半由RC FM安排，一半由GAA EM安排，我一直是主要负责数据支持的工作，去年开始RC部门陆续有人离职，一直没有招人，那FM希望今年开始我开始做audit的工作。那他需要我去做审计工作，我也完全理解并且也努力在做，但我其实更希望自己做分析和模型工作。我听到modeling在招人，非常感兴趣想试一试。

When I joined the bank, my position is embedded DA in RC. Half time support RC DA and half time support other audits from GAA. I mainly focus on data support. Since last year, people in RC team is leaving, and we don’t have enough new joiners. My FM wants me to start to be involved in audit process work. I totally understand and I sort of already know the process of auditing. However, I actually still want to develop my skills in analytics and models. When I heard this team is recruiting, I’m very interested and would like to give a shot.

**What do you see yourself in 2-5 years**

因为我毕竟没有在银行里面做过模型，我希望开始的时候我能快速掌握工作需要的技能，2-3年内改进自己可以提升的地方，熟悉已经有的资料，了解部门的架构，去更好的工作和contribute。

3年之后我希望自己能成为key member能跟其他需要的部门去更好的沟通。比如我刚开始做需要的一些部门已有的东西我不知道放在哪里，3年之后我会比较清楚曾经用到过什么去完成，哪些是需要进一步确认的，我也希望我的拓展我的技能，承担更多责任和挑战，提供更多帮助给其他同事和部门。

In the first 2-3 years, I see myself becoming a (true) experienced staff and master at my role as a modeling manager(job title) at (company name). 1)I plan to immerse myself in the position, 2)understand areas that I can improve on, 3)really get to know the ins and outs of the business 4)and look for opportunities to make the team and department as efficient as possible.

For the 2-3 years after that, I see myself as an expert being a key member and liaison to all the relevant teams in the organization. 1)I want to be able to extend my expertise, 2)take more responsibility and challenges and offer help to other members (and other departments). 3)I would expect to have been successful in this position to the point that I’m able to impact (contribute my work and ideas to the) department decisions.

过去工作中突出表现是什么

BAAT项目

他锻炼的是对已有的Python知识的掌握，新知识的快速探索和使用

最有挑战的项目

迁移到Ali cloud，组下3个人，如何分配任务，如何思考在什么时间阶段达到什么效果。

如何沟通，比如pickle文件的传递。

遇到的setback以及如何解决的

When I first joined the company, it has a lot of teams by lob, country in regional or global. I feel it is like a small world. On the other hand, it is complex and in terms of data system, it can be a giant monster. People like to talk using abbreviation like WPB, CMB. When people talked about these, I feel it is hard to keep pace with their topic. And it is quite overwhelming. For customer data, they are not saved in a few tables.

At that time, people comfort me that you will pick these abbreviation words up one by one. But I feel I need to at least know the most frequent using words. I search for those words once I saw them and I put them in the excel list. I note it down when I heard word in a meeting and I will look up if I saw some words in dashboard.

Review it once before I start one day work. It only took one or two minutes.

That’s how I really pick up words.

如何快速熟悉一个项目领域

都用过Python的哪些包/模块

Numpy, Pandas,

画图 matplotlib

机器学习 sklearn

Schedule job

做的过程中遇到的困难，以及是如何解决的

为什么想要来上海

上海是金融中心，从事业发展的角度，在金融行业上海有更大的发展空间和更多的机会。

我老家是内蒙古，无论广州还是上海都是南方城市，对我来说区别不大。

我每年都去一次上海，有了解那边的生活

财富管理项目

**BAAT 介绍**

我加入DA team的时候，已经支持过很多项目，比如财富管理，信用卡，账户交易，有很多Python分析文件了。我当时的一个项目是整合这些代码，设置统一的参数文件，每月调用参数文件，自动运行所有数据，输出分析结果，生成报告。

这个项目下面难点

1. 当时做分析的时候，每个项目的audit period都不一样，很多是hard code，我第一步是设置参数文档，每个分析用参数文档的时间区间去调取数据，我们设置这个是过去一年。然后我写了一个Python程序在每个月运行之后可以去修改参数文件为最新一年。
2. 这些文件运行之后的output有三种：sampling取样，exception异常数据，summary生成overall view。我们展示dashboard 是在QS平台上做的，其中异常数据和summary在dashboard上用，我写了一个method导出数据到SQL Server 数据库，再建立QS和SQL Server 的连接。
3. 最后我用schedule job(import schedule)来每月固定时间运行一串Python文件，这样设置好之后，可以实现每月参数自动更新，分析文件输出sampling Excel，summary和exception存到数据库，dashboard连接数据库更新内容。
4. 连接数据库加解密

I’d like to introduce BAAT projects. *China Branch Audit Analytics Tool*

GAA team supported china audits for quite a long time and we found some analyses can be used repeatedly for periodic review needs. My manager and I planned an automatic process. And I was in chaegw to designed it follow the idea.

Final result is output files and Qlik sense dashboard for auditors to expolre. the process is we connect to database, write SQL to extract data. Do analysis in python and output in excel/Qlik Sense. QS provides overview and interactive analysis.

To implement it, I first set a parameter file and a program to update it, collected the analyses programs that are useful for future projects. Then I update each of the program in terms of database connection, tables, data scope, loggers of program and output path. Some source data are not available and I need to rebuild logic to replace them. The whole running process should not be interrupted. I set a schedule job in python so that the analysis programs can be triggered and implemented every month. Now the whole process is working functionally.

Some of them are new to me, like set a schedule job. For me, it is learning and applying.

On the other hand, by taking the chance to rebuilt previous scripts, I review a lot of different test scenarios. like transactions that are split into smaller size to avoid providing documents. Like payment happens and those accounts are on SPI(special instructions) list;

For some of tests, since I built them from the beginning, I know ins and outs like wealth management, regulatory engagement, I know details about why we extract such data and what we consider as exceptions. But for those programs that other team member built, I didn’t just change the parameters, test if it run through smoothly. I’m curious for scenarios and transactions are from corporate to individual. read reference documents look up in inventory. And found out

It is required to have special document checking process if such transactions are over CNY 50K

Currently, we have a set of automatic programs I built. audit team colleagues are relying on the output and refreshed dashboard. It saved a lot of time and resources. Meanwhile, I also learned a lot from this project.

有时候简单的问题，但是要细心和耐心。

比如说计算年龄，有一个分析一步是计算用户做风险测评的时候周岁年龄有多大，我们有测评时间和birthdate，第一个想法是考虑到月日，所以先用年份相减，然后再把生日的那年改成风险测评同一年然后比较这两个日期的大小，但是有个问题是，有一些2/29的，改了年之后未必那一年有2/29，这样会报错。然后改成了提取月日组合成新的整数去进行比较。我把这个写到函数里。

第二是这是在一张大表里，有一些是没有值的，所以接下来又处理排除这些空值然后再计算的方法。

所以说有一些处理是要有耐心的。

还有的是函数的使用，比如apply这个函数，一直很好用，但是在处理一个很大的表的时候，很久都没有办法跑出结果，我去做了调查，发现np.vertilize 的函数，有一篇技术贴测评他们的速度。

**问问题**

Junior

Day to day work life是怎么样的

平时的工作方式是怎么样，是每个人习惯做自己的事，还是团队协作的东西比较多

有哪些额外的技能是你希望我有的可以更好胜任这个职位的吗

What does a typical day look like in this role?

what qualities are the most important for succeeding here?

Senior

High-level: 跟行业发展，未来前景相关的问题

这个团队在整个公司里面，在这个架构里面是什么位置

他平时会跟那些团队协作比较多，他的功能是什么

I know this is a second line position in the bank. What’s our role in the second line. Which department do you liaison(collaborate/communicate) with most. (Do you need to talk with regulations?)

What additional skills or experience do you wish I had that would make me a better fit for this job?

关于面试官本人

他的经历，他是怎么一步步走到这个位置的

如果有相似的经历或者能插上话的，那就能更深入的聊一聊了

比如你在investment club对做这个工作有什么更好的帮助，我现在有这个经历能不能更好的帮助我适应这个工作

Networking

1. 活动本身相关的：你为什么要参加这个活动

你的优势是什么

劣势是什么

经历过的setback

项目介绍

评分卡模型

数据挖掘模型

财富管理/工作中用到的模型

在财富管理的项目中，做客户经理的业绩激励和销售额的相关性分析。业绩激励和两个方面相关：performance和behavior，这两点主要看4个KPI的值：（digital engaged customers, client appointment, financial review, wealth net new money）[expectation, actual, percentage], 首先发现performance和behavior并没有参照KPI的值，KPI完成的都超过100%的人仍然得不到好的rating。然后用KPI 和sales共同和奖金做了回归分析。发现只有KPI中的client appointment,和sales系数显著，并且adj-R2是51%。如果不加KPI，只用incentives 和sales，R2可以达到77%。我们做的过程按照role group分组(insurance product specialist, JADE, Virtual RM),结果类似。

卡方检验overall performance和manager assessment, growth ranking 相关性

理财产品推荐和客户投资偏好匹配度检验

1. 推荐理财产品期限和客户投资期限
2. 推荐理财产品风险等级和客户风险评估分数
3. PVC 不适合买的产品

客户属性：年龄，受教育程度，diability,可支配收入

信用卡项目

1. 抽样数据准备
2. Credit card issued with no usage for active/non-active cards ->check if cards were authorized by customers.
3. Account opened & closed in 30days/60days, review reason for closure -> misselling
4. Taking cash advantage limit: $1000/d, $10000/m
5. 异常分析

Fee code/ fee amount for closed account

1. 聚类分析模型

购买消费的金额（9am-12am）(12am-9am)，交易笔数（9am-12am）(12am-9am)，信用卡限额，信用卡余额，分期付款频率，支付的费用，还款金额比

1. 信用卡市场报表、持卡人画像

办卡渠道：Online, Promotion channel活动营销, JD，公司团办

账号类别：正常，关注，可疑，次级，损失

职业：

国际

信用卡额度

交易金额

% of application to activated card

信用卡分析

1. 信用卡发行后没有被使用，对于无论激活与否的卡，检查时候由客户授权
2. 账户开和关在30/60天内，review关账户的理由，检查是否是misselling
3. 取现是否超过额度，每天$1000,$10000/m
4. 使用超过限额

**缺点 weakness**

When I first the team, I work as DA specialist in RC team. All my team members in RC are auditors. They work on several projects or they come to ask my idea in DA perspectives. Sometimes I was working on project 1 and people in project 2 come and ask me to support. I find it hard saying no to people, especially they are my teammates. I said, no problem I will have a look. Ok I will join the meeting. But at one time, I felt overwhelmed. That feeling is not about I cannot finish the tasks before ddl. It’s the uncertainty of the workload in the next few days.

After I joined the team for a few month, learned how to deal with this situation.

1. First I’m familiar with the audit phases, ask timeline prioritize the work.
2. I found people come to ask my help, usually it’s not urgent or a hard ddl. I still can assess my own workload, my capacity and arrange my tasks accordingly.
3. I start to ask people in DA team advice if they have experience of supporting a similar projects.

I’m still feel hard to say no. But I’m more comfortable and I find a way to deal with it.

工作介绍

第一份工作

INA工作

Wealth management

1. We check customers’ RPQ level with the product risk level they bought. They should not buy products with higher risk.
2. For potential vulnerable customers, there are lists of products they are not allowed to buy. Providing exceptions and sampling are also our works.
3. We also check if one customer updates the RPQ and risk level notch up 3 levels within 3 days. Or if one chooses NKNE and then change it with WKWE in the same day. That’s also unusual.
4. Some analysis includes both unit trust transactions and insurance. If any customer redeems unit trust and then buy insurance. And if that situation repeatedly occurs over one RM.
5. UT: 我行客户投资资质要求：境内居民，去的外国人永久居留身份证的外国人，工作一年且投资资金来自中国进内收入的境外个人。满足资质但不得为满足定义的美国人或加拿大人。

INS: 满足资质但不得为满足定义的美国人或日本人。

HSBC Jade is a privileged and personalised service for clients who maintain Total Relationship Balance of at least HKD7.8M with us in Hong Kong. Terms and Conditions apply.

风险评估问卷评分标准

0-5保守型，谨慎型，稳健型，平衡型，进取型，激进型

房贷审计

房贷申请信息：

所在城市，房产类型：一手二手equitable property；房屋购买价格，房屋估值，房屋年龄，面积

贷款额度，贷款利率（base interest rate + interest rate spread=final interest rate），

LTV: loan to value

No of property china

No of property city

贷款人年龄，婚姻状况，verified income，国籍户口，职业

房贷分析

1. To check if approved loan to value is aligned with LTV requirement published by city regulators and government.
2. Check if any abnormal/unusual interest rates and potential outlier interest rates assigned with pricing scheme
3. To check if any large amount inward remittance from 3rd party within 3 months period before drawdown. (might from a forbidden source)

BAAT:

客户国籍职业，客户等级，开户行，公司客户/个人客户，转账交易地区，结售汇

贸易部门GTRF ？

credit企业客户类型：国企，私企，国外投资企业，评级

信用卡：

申请总客户，总卡数，激活比例

卡类型

客户信用等级，职业,

受雇状态：全职，兼职，自雇，退休，学生，无业

办卡途，

卡片使用额度

限额

账户状态：正常，关注，可疑，次级，损失

费用

Payment

1. For companies with more than 200 thousand US $ under capital item, we need to check supporting documents and purpose of the payment

单一机构每月备用金（含资本金，外债等资本项目的意愿结汇和支付结汇）支付累计金额不得超过等值20万美金。

1. Payment to capital item should not be a cash inward payment

资本金账户和境内在投资专用账户的账户资金应以现汇汇入不得以现钞存入。

1. Extract payment transactions for customer with SPI (special instruction) [enhanced doc required]
2. Under trade service, to same beneficiary for repeated/similar transaction within 3 consecutive days/within 30 days

Balance of Payments Reporting (BoP Reporting) 境外汇款申请书

RC Requirement: For services in trade, it is prohibited to split the transaction in order to bypass the regulatory monitoring.

1. It is required to have special document checking process if transactions are from corporate to individual over CNY 50K

Account

1. List of customer with address unknown( both personal & non-personal
2. For below specific account (GB/CMB/RBB) with no transactions for consecutive 13 months, check the customer account loaded with SPI
3. For corporate customer, critical information change with high inherent risk including a represent personal information (eg: ID Type, ID number, ID expiry date)
4. CAT I/II/III account,
   1. CAT III balance higher than CNY 2k
   2. One signal individual customer has more than one RMB CAT I settlement account
5. Corporate RMB settlement account annual review（三年检）

Counter

1. SAFE requirement of individual customer’s daily foreign currency cash withdrawal quota check(USD 10K)
2. SAFE requirement of individual customer yearly foreign currency exchange quota check (USD 50K per calendar year)
3. SAFE requirement of FCY cash deposit or withdrawl of individual watchlist customer
4. SAFE requirement of nil cash withdrawl for some specific kinds of corporate accounts
5. 5个以上不同人同日隔日或连续多日分别购汇后，将外汇给一个人
6. Individual customers have ransactions with expired ID
7. PBOC requirement of no use of type II and type III account for foreign currency purchase or sale
8. SAFE requirement of bank internal control to prevent split transaction which bypass daily FCY purchase quota of OVC/FOC.HMT customer

为什么选择汇丰

1. financial industry with good reputation.
2. The working description is about analyzing financial related data, which is what I want
3. 文化更容易适应。

IRIS- integrated regulatory information system

IRIS is a global tool for recording , escalation and tracking of Reportable Event and Regulatory Inspections.

It may also be used to record and track Compliance Reviews, projects and issues. RCRA(regulatory compliance risk assurance)

It helps to assist with continuous monitoring of LOB, identify information for audit scoping,

Review coverage region, legal entity, LOB, control profile rating, issue rating,

Activity stage and report date tracking and monitoring

Review:

Corss border activities: UK CMB

Client assets: records, accounts and reconciliations

Review on implementation of global account dealing plicy

Review on anti-e crime in HACN, including controls to 3rd party data processing outsourcing)

**结构化产品**（Structured Products）广义上可以理解为所有为客户量身定做的金融产品。一般来说在发达金融市场中所有的场外交易（Over-The-Counter）的金融衍生品（Financial Derivatives）都可以称为结构化产品。他们之所以被称为结构化产品，是因为他们通常是将各类衍生品组合起来从而构建成为一种“组合化产品”。

结构化产品说简单点就是各种基础金融工具通过搭乐高积木的方式互相组合从而产生的一种新的金融工具。举例来说，简单的结构化产品比如可转换债券，就是一份固定利率债券加上认股权证。还有比如可售回债券，就是一份固定利率债券加上一份债券价格看跌期权（利率看涨期权）。

1、什么是评分卡？

在银行借贷场景中，评分卡是一种以分数形式来衡量一个客户的信用风险大小的手段，一般来说，评分卡打出的分数越高，客户的信用越好，风险越小。

2、评分卡怎么使用？

对于需要借贷的个人或者公司，在借贷时需要填写一张表格，表格内容包括年龄，收入，家庭人口数量等等。评分卡将每个特征划分为几个区间，每个区间有一个分数。根据客户所填信息对照评分卡，为客户所填的每一个特征赋一个分数，最后相加计算这个用户的总得分。依据总得分评估他的信用程度。

3、怎么使用逻辑回归制作评分卡？

制作评分卡需要大量客户所填的信息（特征矩阵X），以及该客户是否违约的信息（标签Y）。

（1）对特征矩阵X进行数据预处理。包括去除重复值，填补缺失值（仅有极少数样本缺失该特征可考虑直接删除该特征，可使用均值填补家庭人数，随机森林填补收入等），处理异常值，处理样本不均衡问题（使用过采样和欠采样的方法），但是我们一般不对数据进行标准化处理（这是因为我们给出的评分卡是给业务人员看的，而客户所填信息天生就是量纲不统一的）。

（2）找出每个特征最佳分箱数和箱子边界。最佳分箱数就是使得该特征的IV值尽量在最佳IV值区间的箱子个数（尽量提高每个特征的重要性），并且使得该特征的箱内相似，箱间差异大。因此步骤是这样的：首先确定一个较大的分箱数，进行等频分箱，计算各箱WOE值和特征的IV值，然后依据卡方检验值合并相似箱子，再次计算各箱WOE值以及该特征IV值，直到箱子数量变为一个较小值。画出分箱数-IV值曲线，找出最佳分箱数和各箱边界。

（3）对各个特征依据最佳分箱边界进行分箱。分箱后得到特征的各箱边界以及WOE值。

（4）处理训练集和测试集的特征矩阵X。将特征矩阵中的值全部替换为对应箱子的WOE值。

（5）使用训练集进行建模，使用测试集计算模型得分，并且利用学习曲线调整正则化系数C和最大迭代次数max\_iter提高模型得分。

（6）制作评分卡。根据该公式的值计算出系数A和B的值，根据逻辑回归得到的截距lr.intercept\_、各特征系数lr\_coef\_。用base\_score = A - B\*lr.intercept\_公式计算该评分卡的基准值，用col\_score = woeall["i\_colName"] \* (-B\*lr.coef\_[0][i])计算各特征的分数列表（每个箱子对应一个分数），其中woeall["i\_colName"]是i特征的箱子边界列表和对应的WOE值列表。

4、为什么要使用逻辑回归制作评分卡？

评分卡制作其实就是将连续的特征离散化（分箱），且为每一个离散值赋一个分数（该箱的WOE值）。其中逻辑回归的截距用于计算评分卡基准值；逻辑回归系数表示各个特征在判别标签时的重要程度；各箱的woe值用于逻辑回归建模时代替特征矩阵X原始值带入计算。

Result-oriented and cross-functional experienced data analytics with strong analytical and communication skills  
• Data Analysis: Experienced in Data Mining, Visualization, and Management in large banking and financial service industry   
• Other Skills: Comfortable presenting to technical and non-technical audiences, project management, and multi-tasking  
• Analytical Tools: Working knowledge with SAS, Python, Qlik Sense, Tableau, MS Excel, SQL, Toad

Hi Yu, I am currently in Shanghai, China. I am actively looking for opportunities in Canada. My background are similar to yours. Audit data analytics is a minor domain. Let's get connected:-)

•Experienced Data Analyst with a demonstrated history of working in the bank and market research industry.

•Skilled in Data Mining, Visualization, and Risk Management with tools SAS, Python, Qlik Sense, Celonis, MS Excel, SQL.

•Strong information technology professional with a Master Degree focused in Financial Statistics and Risk Management from Rutgers University-New Brunswick.