

? c bZYhh]i bX`[ i hY`@Ui bY.` ð gh'DUfhm  
Ui Z`XYa`GWX]ZZYbVYf[ `VY[ Y]ghYfh

5a`j`Yf[ Ub[ YbYb`GUa`ghU[ UVYbX`hfUh`Y]bY`K`Y`Y`XYf`  
: fÒ\`]WX`\_Y]h`Ui Z`XYa`GWX]ZZYbVYf[ `]b`; ]Y»Yb`Ui Z`6Y]`XYf`  
: : < `ð gh'DUfhm`Yf`YVhYb`fi bX`%\$\$\$`; ÀghY`Y]bY`BUWX`h  
j`c`Yf`A`i`g]\_ž`hUbnYbXYf`A`YbgWX`Yb`i`bX`?cbZYhh]"`8Yf`  
VY`]YVhY`F`UX]c!`: : <!A`cXYfUhc`f`i`bX`8`>8Ub]Y`:` ]gWX`Yfž`  
i`bhYfghØhnhj`cb`XYb`DUfhm!8`ğ`6i`ZU`c`/`Ua`d`/K`U`UWž`  
gcf[ hY`ZØf`Y]bYb`a`i`g]\_U`]gWX`Yb`; Ybi`gg`XYf`9i`hfU`\_UggY`"8]Y`  
J`YfUbghU`hi`b[ `k`Uf`

5a`j`Yf[ Ub[ YbYb`GUa`ghU[ UVYbX`hfUh`Y]bY`K`Y`Y`XYf`:  
fÒ\`]WX`\_Y]h`Ui Z`XYa`GWX]ZZYbVYf[ `]b`; ]Y»Yb`Ui Z`6Y]`XYf`  
: : < `ð gh'DUfhm`Yf`YVhYb`fi bX`%\$\$\$`; ÀghY`Y]bY`BUWX`h  
j`c`Yf`A`i`g]\_ž`hUbnYbXYf`A`YbgWX`Yb`i`bX`?cbZYhh]"`8Yf`  
VY`]YVhY`F`UX]c!`: : <!A`cXYfUhc`f`i`bX`8`>8Ub]Y`:` ]gWX`Yfž`  
i`bhYfghØhnhj`cb`XYb`DUfhm!8`ğ`6i`ZU`c`/`K`U`UWž`  
gcf[ hY`ZØf`Y]bYb`a`i`g]\_U`]gWX`Yb`; Ybi`gg`XYf`9i`hfU`\_UggY`  
"8]Y`J`YfUbghU`hi`b[ `k`Uf`Y]b`; Ygh`ZØf`X]Y`G]bbY`i`bX`Vch`Y]bY`  
Ui`ZfY[ YbXY`A`]gWX`i`b[ `Ui`g`j`YfgWX`]YXYbYb`A`i`g]\_f]WX`hi`b[ Yb`"

J`cb`C`X]Yg`ØVYf`<]d<cd`V]g`\]b`ni`XYb`?i`h!<]hg`XYf`,`\$Yf`i`bX`  
-`\$Yf`đ\fy`k`i`fXY`XUg`DiV`\_i`a`a`]hi`bj`Yf[ Ygg`]WX`Yb`A`Y`cX]Yb`  
j`Yfk`Ò\bh`"8]Y`5i`gk`U`X`XYf`Gcb[ g`i`a`ZUgghY`U`Yg`j`cb`A`Umc`f`  
Hca`V]g`ni`a`<]h`@Um`U`žgcXUgg`YXYf`Ni`ØfYf`Ui`ZgY]bY`?cghYb`  
\_Ua`"8]Y`8`ğ[ UVYb`g]WX`Ui`ZXYf`6Ø\bY`ja`Z]Y[ YbXYb`K`YWX`gY`  
XUg`A`]\_fc`Zcb`]b`X]Y`<UbX`i`bX`\_fY]YfhYb`gca`]h`Y]bY`  
YbYf[ ]Y[ Y`UXYbY`5ha`cgd`ÀfYž`X]Y`X]Y`; ÀghY`ni`a`: Y]Yfb`  
Ub]a`]YfhY`"

9]b`i`bj`Yf[ Ygg`]WX`Yg`9f`YVb]g`ZØf`U`Y`

8`Ug`9j`Ybh`ZUbX`]b`Y]bYa`Vi`bhYb`i`bX`ZfÒ\]WX`Yb`F`U`a`Yb`ghUhh`"

J ]Y`Y`6Ygi WXYf`k UfYb`]b`\_bU`Vi bhYb`Ci hZ]hg`]a`F Yhf`cgh`  
YfgWXYbYb`i bX`nY][ hYb`]\fY`VYghYb`HUBna`cj Yg`"A`]h  
D`Ugh]\_dU`a`Ybž`"Yi WXYbXYb`GhAVYb`i bX`Y]bYf`Ui ZFY[ YbXYb  
?cbZYhh]!9I d`cg]cb`YbhZU`hYhY`g]WXY`Y]bY`k U`fY`DUfhm]5ha`cgd`ÅfY`  
8Ub]Y`": ]gWXYfž`XYf`j`cb`gY]bYa` `cWXY`Y`Y[ YbYb`A`]gWXYdi`h`XUg  
HfY]VYb`]a`6`]W`\_`U`hYž`\_`cbbhY`X]Y`6Y[ Y]ghYfi b[ `XYf`A`Yb[ Y  
`Ui hbU`Yf`YVYb`" K Ug`ZØf`Y]bY`A`Y[ U!Gh]a`a`i`b[ `i`bX`k`Ug`ZØf`Y]b  
hc`"Yg`Di`V`\_`i`a` ž`f]YZ`Yf`]b`X]Y`A`Yb[ Yž`k`Ug`VY]`XYb`;`ÅghYb`ZØf`  
Yi`d`cf]gWXYb`ž`VY`"gcf[ hY`"

8]Y`B`UWXY`j`YfU`bghU`hi`b[ `k`i`fXY`gWXY`Y]`WXY`bcWXY`j`cb`Y]bYf`Zf]gWXYb  
6f]gY`i`bX`Y]bYa` `i`fnYbž`"Y]WXYb`F`Y[ YbgWXY`Ui`Yf`VY[ `Y]hYh`"8cWXY  
X]Y`Gh]a`a`i`b[ `k`Uf`i`b[ YVf`cWXYb`"8]Y`\_`Ø`Y`@`Zhi`bX`X]Y`A`i`g]\_`  
gWXY`UZZhYb`XUg`d`YfZY`\_`hY`DUfhm]:`YY`]b[ ž`XUg`k`Y]hYf`]\`b`ZØf`:`fYi`XY  
i`bX`5i`g[ Y`UggYb`Y]h`gcf[ hY`"8Yf`F`Y[ fUi`a`gWXY]Yb`X]Y  
6Y[ Y]ghYfi b[ `XYf`:`Y]YfbXYb`bi`f`bcWXY`ni`j`YfghÅf`\_`Yb`i`bX`gcf[ hY  
XUZØfž`XUgg`X]Y`Gh]a`a`i`b[ `k`Å`fYbX`XYf`[ YgUa`hYb`J`YfU`bghU`hi`b[  
Ui`ZXYa` `<`Ø`Ydi`b`\_`h`V`]YV`"

## A i g]\_`U`g`j`YfV]bXYbXYg`9`Ya`Ybh

8]Y`":`<`ž`gh`DUfhm`Ui`ZXYa`";`]Y»`YbYf`<`Ui`gVYf[ `nY][ hž`k`]Y  
A`i`g]\_`A`YbgWXYb`ni`gUa`a`YbVf]b[ Yb`\_`Ubb`"8]Y`J`]Y`nU`\_`Ub  
A`i`g]\_`f]WXYhi`b[ Yb`i`bX`X]Y`Vi`bhY`8`UfghY`"i`b[ `XYf`HY]`bY`a`Yf  
a`UWXYb`X]YgYg`9fY][ b]g`ni`Y]bYa` `i`bj`Yf[ Ygg`]WXYb`9f`YVb]g`ZØf  
U`Y`5bk`YgYbXYb`"9g`k`Uf`Y]b`5VYbXž`Ub`XYa`X]Y`Gcf[ Yb`XYg  
5`"hU[ g`\_`Y]bY`F`c`"Y`gd]Y`hYb`i`bX`ghUhhXYggYb`XUg`:`Y]Yfb`i`bX`X]Y  
;`Ya`Y]bgWXY`UZh]a` `J`cfXYf[ fi`bX`ghUbXYb`"

6`]W`\_`Yb`k`]f`bcWXY`Y]ba`U`Ui`ZXY`Y`<][ `]\`][ `hg`XYf`J`YfU`bghU`hi`b[  
ni`fØW`"8]Y`8`ž`VY`\_`Ubbh`ZØf`]\fYb`\_`fYUh]j`Yb`A`]i`Ui`g  
j`YfgWXY]XYbYb`A`i`g]\_`gh]`Ybž`UVYb`Yg`[ YgWXY`UZZhž`YXY`;`YbYfUh]cb  
ni`f`:`Y]Yf`ni`VYk`Y[ Yb`"8]Yg`nY][ h`XYi`h`]WXYž`k`]Y`A`i`g]\_`gY`Vgh]b  
Y]bYa`UVk`YWXYg`i`b[ gfY]WXYb`Dfc[ fUa`a`U`g`[ Ya`Y]bgWXY`UZh]WXYf  
?cbghUbh[ `U`h`"

⇒`Y]bYf`NY]hž`]b`XYf`X]Y`A`YbgWXYb`c`Zhi`a`]h`GhfYgg`i`bX  
<`YfUi`gZcfXYfi`b[ Yb`\_`cbZfcbh]Yfh]g]bXž`k`Uf`X]Y`":`<`ž`gh`DUfhm`

Y]bY'k ]`\_ca a YbY'5Vk YWk'g'i b[ "'Gc`WkY'9j Ybhg'Z0fXYfb`X]Y  
@YVYbgZfYi XY'i bX'gWkUZZYb'9f]bbYfi b[ Ybž'X]Y`Ub[ Y']b`XYb  
?0dZYb`XYf`HY]`bY\ a Yf`V`Y]VYb"8 Ug'; YgWkY\Yb`Ui ZXYa  
GWk]ZZYbVYf[ 'k Uf`b]Wk'h'bi f`Y]bY'DUfhmž'gcbXYfb`Y]b`5i gXfi W\_`j cb  
Ni gUa a Yb[ Y\0f][ \_Y]hi bX': fYi XY'`9`Ya YbhYž`X]Y]b`XYf  
\Yi h][ Yb'gWk'bY`YV][ Yb`K Y`hi a gc`k Yfhj c`Yf`g]bX"8]YgYg'9j Ybh  
\_0bbHY`U`g'`hgd]fUh]cb`Z0f`ni \_0bZh][ Y`A`b`]WkY`J YfUbghU`hi b[ Yb  
X]YbYbž`X]Y`J YfV]bXi b[ 'i bX'; Ya Y]bgWkUZh`Ui ZY]bY`Ui g[ Y`UggYbY  
5fhi bX`K Y]gY`Z0fXYfb"

9]b`6`]W\_`Ui Z`X]Y`J YfUbghU`hi b[ gUb[ YVchY  
]a`? fY]g'; ]Y» Yb

8 Ug'5b[ YVch`Ub`J YfUbghU`hi b[ Yb`]a`? fY]g'; ]Y» Yb`\Uh]g]Wk`]b`XYb  
`YhhYb`š\ fYb`ghUf`\_`X]j Yfg]Z]n]Yfh"BYVYb`a`i`g]\_U`]gWkYb  
J YfUbghU`hi b[ Yb`k ]Y`XYf" : : < `š gh'DUfhm~`[ ]Vh`Yg`Ui Wk  
nU\`fY]WkY`\_i`hi fY`Y`i bX`gdcfh]WkY`9j Ybhgž`X]Y`X]Y`6Yj 0`\_Yfi b[  
Ubn]Y\Yb"': Ygh]j U`gž? cbnYfhY`i bX`A`A`f`\_hY`g]bX`HY]`XYg`A`\f`]WkYb  
?U`YbXYfg`i bX`V]YhYb`gck c`\`XYb`60f[ Yfb`U`g`Ui Wk`Hci`f]ghYb  
Y]bY`VfY]hY`DU`YhhY`Ub`5\_h]j ]h`hYb"

Ni`XYb`VY`Y]VhYghYb`J YfUbghU`hi b[ Yb`n`A`\`h`XYf"; ]Y» YbYf  
K Y]\bUWk'hga Uf`hž`XYf`Y`XYg`š\`f`<`i bXYfhUi`gYbXY`j`cb  
6Ygi WkYfb`Ubn]Y\`h" < ]Yf`V]YhYb`c`\_U`Y`<`A`bX`Yf`\`UbX[ YZYfh][ hY  
DfcXi`\_hY`i bX`fY[ ]cbU`Y`GdYn]U`]h`hYb`Ub"8]Y`A`]gWk`i`b[ `Ui`g  
hfUX]h]cbY`Y`f"; Ya 0h]Wk`\_Y]hi bX`a`cXYfbYb`5hfU\_h]cbYb`a`UWk`h  
X]YgYb`A`Uf`\_h`ni`Y]bYa`<][ \`][ \`h`XYf`GhUXh"

8 ]Y`F`c`Y`j`cb`A`i`g]\_`j`YfUbghU`hi b[ Yb`]b`XYf  
; Ya Y]bgWkUZh

A`i`g]\_`j`YfUbghU`hi b[ Yb`\UVYb`Y]bYb`VYXYi`hYbXYb`9]bZi`gg`Ui`Z`X]Y  
; Ya Y]bgWkUZh`i`bX`hfU[ Yb`ni`f`gc`n]U`Yb`h`hY[ fUh]cb`VY]"G]Y`V]YhYb  
b]Wk`h`bi`f`i`bhYf\U`hi b[ ž`gcbXYfb`Z0fXYfb`Ui Wk`XYb`5i`ghUi`gWk  
nk`]gWkYb`XYb`A`YbgWkYb" `h`; ]Y» Yb`nY][ h`X]Y`\`c`\Y  
HY]`bY\`a`YfnU\`Ub`9j Ybhg`k`]Y`XYf" : : < `š gh'DUfhm~ž`XUgg`X]Y  
60f[ Yf`Y]b`ghUf`\_Yg`h`hYfYggY`Ub`[ Ya Y]bgWkUZh]WkYb`9f`YVb]ggYb

\UVYb"

8]Y`A i g]\_VfUbWXY`Uhg]W`]b`XYb`YhnhYb`J\ fYb`YVYbZU`g  
j YfÅbXYfhž]bXYa`g]Y`g]W`Ub`bYi`Y`HfYbXg`Ub[ YdUggh`Uh`8 ]Y  
9]bVYn]Y\i b[ `j YfgW]YXYbYf`A i g]\_[ YbfYg`i bX`X]Y`C f[ Ub]gUh]cb  
]bhYfU\_h]j Yf`9j Ybhg`hfU[ Yb`XUni`VY]ž`i bhYfgW]YX`]WY  
5`hYfg[ fi ddYb`i bX`i; YgW`a`ÅW`Yf`Ubni`gdfYW`Yb`"8 ]Y`8`gž`X]Y`VY]  
XYf`" ž`gh`DUfhm~`Ui ZY[ hYbž`nY][ Yb`]b`]\fYf`5i`gk`U\`ž`k ]Y`j ]Y`ZÅ`h][  
XUg`A i g]\_Ub[ YVch]ghž`XUg`X]Y`i; YbYfUh]cbYb`j YfV]bXYh"

? i `hi fY`Yf`i bX`k ]fhgW`UZh`]W`Yf`9]bZ`i gg`j`c`b  
9j`Y`b`hg`

J YfUbghU`hi b[ Yb`k ]Y`X]Y`" : : < ž`gh`DUfhm~`\UVYb`b]W`h`bi`f`Y]bYb  
\_i`hi`fY`Ybž`gcbXYfb`Ui`W`Y]bYb`k ]fhgW`UZh`]W`Yb`9]bZ`i`gg`Ui`ZX]Y  
FY[ ]cb`"G]Y`n]Y\Yb`b]W`h`bi`f`c`\_U`Y`6Ygi`W`Yf`Ubž`gcbXYfb`Ui`W`  
Hci`f]ghYb`Ui`g`UbXYfYb`HY]`Yb`8Yi`hgW`UbXg`i`bX`gc[ Uf`Ui`g`XYa  
5i`g`UbX`"Gc`W`Y`9j`Y`bhg`ZØfXYfb`XYb`c`\_U`Yb`9]bnY`\UbXY`ž`X]Y  
; Ughfcbca ]Y`i`bX`X]Y`8 ]Ybgh`Y]ghi`b[ gVfUbW`Y"

9]bY`I`bhYfgi`W`i`b[ `XYg`<UbXk`Yf\_g\_Ua`a`Yf`K ]YgVUXYb`nY][`hž  
XUgg`J`YfUbghU`hi`b[ Yb`]b`GhÅXhYb`k ]Y`i; ]Y»Yb`Xi`fW`gW`b]h`]W`V]g  
ni`" \$`i`a`Y`f`I`a`gUhn`ZØf`c`\_U`Y`i; YgW`ÅZh]b\UVYf`[ YbYf]YfYb  
\_ØbbYbž`k`Yb`b`X]YgY`[ i`h`VYgi`W`h`g]bX`"8 ]Y`?`ca`V]bUh]cb`Ui`g  
I`bhYf\U`hi`b[ `i`bX`]bhYbg]j`Ya`9]b\_Ui`ZgYf`YVb]g`]gh`ZØf`j ]Y`Y  
K ]fhgW`UZhgnk`Y][ Y`j`cb`Y`bhgW`Y]XYbXYf`6YXYi`hi`b[ "

8]Y`C`f[ Ub]gUh]cb`X]YgYf`J`YfUbghU`hi`b[ Yb`YfZcfXYfh`ni`XYa`X]Y  
Ni`gUa`a`YbUfVY]h`nk`]gW`Yb`j`YfgW]YXYbYb`5\_hYi`fYb`k ]Y  
GhUXhj`Yfk`U`hi`b[ Ybž`GdcbgcfYb`i`bX`7ca`a`i`b]hm`i; fi`ddYbž`k`Ug  
X]Y`gcn]U`Y`?`c`Åg]cb`i`bX`X]Y`k ]fhgW`UZh`]W`Y`J ]hU`]hÅh`XYf`FY[ ]cb  
k`Y]hYf`ghÅf`h"

6Ygi W\Yb`G]Y`i bg`Ui Z.`b!U[ "XY